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Manufacturers' Record.

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BALTIMORE, MD., JUNE 16, 1904.

THE ST. LOUIS EXPOSITION.

The Manufacturers' Record will be represented at the exposition by Mr. Albert Phenix, its Southwestern representative, with office in the Missouri Trust Building.

INCITING TO PROGRESS.

In announcing plans for the new million-dollar home of The American, Gen. Felix Agnus gives again by his works a token of his long-standing faith in Baltimore. The building is to rise sixteen stories high on the enlarged site of the structure which was destroyed on February 7. It is to be not only the home of The American with increased facilities, but also a center of model offices equipped with all modern conveniences and facilities for the transaction of many lines of business. There will be 350 of these offices, and though the building is not expected to be entirely ready for occupancy before next May, The American proposes to issue from its new presses in the building on January 1 next. This feature of the plans of General Agnus is a manifestation of enterprise and energy added to belief in Baltimore's future, which, if sustained all along the line, will make in a comparatively short time the burnt district merely a memory, and will find Baltimore more prosperous and progressive than ever before.

WORKING FOR MISSISSIPPI.

The Mississippi legislature at its last meeting appropriated more than a quarter of a million dollars to be expended for various purposes in the improvement of the Agricultural and Mechanical College of the State during 1904 and 1905. President J. C. Hardy of the college informs the Manufacturers' Record that the authorities are preparing to complete a \$35,000 engineering building, a \$3000 greenhouse and barns costing \$10,000, and that more than \$20,000 worth of new equipment will be installed during the year. The season just closed has been the most prosperous in the history of the college, with 709 students during the year. Under the lib-

eral patronage of the legislature and the wise administration of President Hardy the Mississippi Agricultural and Mechanical College is rendering efficient service in the industrial development of the State, and is being fitted to do even better work.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 60 and 61.

POLITICS AND COTTON PRICES.

The Manufacturers' Record is not in any sense a political paper, and has no political affiliations, but it is compelled to protest against the evidences which crop up from time to time that political influences are being used in order to depress the price of cotton for the benefit of the cotton-mill interests of New England, without regard to the injury thus incurred by the planters of the South. Commenting on this, the Manufacturers' Record recently pointed out the impropriety on the part of Secretary Wilson of the Agricultural Department in giving last summer a "bear" interview as to the price of cotton for the benefit of the cotton mills of the East. It was suggested then that this had proved disastrous to the very people whom he hoped to benefit. The New England cotton-mill people, taking it for granted that Secretary Wilson knew whereof he spoke, refused to buy cotton early in the season, and thus have been forced to pay the much higher prices prevailing since, and a great many of them have been forced to close down by reason of the actual scarcity of cotton. This has produced a condition of very considerable distress among the cotton-mill operatives of New England. Continental spinners, who did not have the same faith in Secretary Wilson that the New England spinners had, bought cotton freely, and the mills of Germany and other continental countries are not among those who are making so much outcry. It has been suggested that this action of Secretary Wilson and the consequent shutting down of many New England mills might have some serious campaign effect this fall, but to head it off, the following curious statement on "the political effect of the reported increased acreage of cotton and the prospect of a record-breaking crop" has been made, according to a dispatch from Washington, by "the local administration organ which usually directly reflects White House sentiments":

The effect of cotton production on the coming campaign is a subject that has proved interesting to politicians since the statement of the Department of Agriculture was issued last Saturday. The consensus of opinion on the part of both republicans and democrats is that so far as the increased cotton yield of the coming year concerns the political world, it will tend to the advantage of the republican candidates, in that it indicates conditions that will make for added prosperity for both the South and the North. * * * The political significance of the prospective increase in the volume of the crop and the lowering of the price lies in the fact that especially in Rhode Island and New Jersey, where many cotton mills have been closed

on account of the high price and the short crop, there will be a resumption of business and thousands of idle men and women will go back to work. This result, it is expected, will be realized next fall, so that it will have an effect in these States during the campaign.

Everyone acknowledges that a continuance of prosperous conditions will vastly help the republican ticket.

Massachusetts mills have also been affected by the condition of the cotton market, but in that State the closing of mills has largely been avoided. But Rhode Island and New Jersey, which are regarded as fighting ground for the democrats, will feel the effect of the changed condition in a very material way.

The effect of the price of cotton on a political campaign, especially in New England, is a topic which government organs should handle very gingerly during the next few months. It is a sore subject in some quarters.

It is entirely too early in the season to make any predictions whatever as to the extent of the coming crop. The effort that is being made to create an impression that because there has been an enlarged acreage we are certain to have a very large crop is calculated to seriously mislead the public, or rather it is calculated to impress upon the public an expectation of a large crop, which may not materialize. Another 10,000,000-bale crop would really be a disaster, not to the South, because it would sell for even far more than the last crop, but it would be a disaster to the world, for it would necessitate the closing of many mills, since it would not provide a sufficient amount of the raw material to go around; but an attempt to "bear" the price of cotton on the possibility of a big crop would be as unjust to the manufacturer as to the producer. Any effort to utilize such a situation as this for political effect would be an outrage, and the Manufacturers' Record hopes that the mistake made by Secretary Wilson last year was simply a stupid blunder, unpardonable, it is true, but it was less culpable if due to stupidity than to any political scheme. That blunder, however, will make the public very suspicious of anything which emanates from the same department this year in regard to the cotton crop.

INVESTING AGAINST FIRE.

Chief Horton of the Baltimore fire department is anxious that more fire companies should be provided for the business section of that city. In rather an odd coincidence there was not a fire-company station within the district devastated by fire last February, though there are several not far beyond its borders. Still the fire demonstrated that however well disciplined and efficient the men of a department may be, they cannot cope with a great emergency without a large enough equipment. Chief Horton suggests a double company for a location within the burnt district and a strong company just outside it as likely to prove of value. That suggestion is eminently wise. No consideration of economy should be permitted to prevent its adoption by the city authorities. Provision for adequate protection against fire is one of the best investments the municipality may make.

SMALL THINGS IN INVENTION.

How great achievements in industrial history are due to comparatively slight circumstances is well illustrated in a sketch of the origin of sewing cotton, prepared for the last meeting of the New England Cotton Manufacturers' Association by Mr. James Clark of Paisley, Scotland, the third in line of succession in the great business established there a century ago and now represented in an establishment of Paisley covering 100 acres of ground, with an engine horse-power of 30,000, consuming 400 tons of coal a day, and giving employment to more than 10,000 operatives, besides mills in New England, in Russia, Spain and Germany. In 1753 the poverty-stricken widow of a scotch farmer, Allan Clark, and her six small children sought employment in the mills at Paisley. Two of the children, Patrick and James, built up a business of making silk twine for the manufacture of heddles, a requisite for every loom. The silk came from Hamburg, Germany, and the business was in a flourishing condition in 1803 when Napoleon, at war with Great Britain and with other nations, occupied Hamburg. To cripple British industries, Napoleon caused all the stock of silk at Hamburg to be burned. This threatened to ruin the Paisley weavers. In the emergency Patrick Clark thought of substituting cotton warp yarn for silk in the manufacture of heddles, twisting it into thread in the manner that six-cord sewing thread is made today. The experiments succeeded. It suggested another industrial move to James Clark, a nephew of Patrick. He was his father's manager in the business of selling weavers' furnishings. He also sold for domestic purposes linen thread. This appeared to him to be so rough and uneven that he recommended the substitution for it of smooth cotton thread. One trial was enough to lead the women to use the cotton thread exclusively. At first this thread was sold in hanks or skeins, and was wound by the women into little balls. To accommodate his customers, James Clark adopted the practice of winding the thread upon spools, which cost him 12 cents a dozen and for which he charged a half-penny, which was refunded upon the return of the empty spool. Young Clark ordered these spools from a wood turner to the extent of half a gross at a time, and he would carry his completed order home in his pockets.

From these insignificant beginnings developed the great trade in spool cotton thread, with its kindred industries in wood and steel, a type of the inventive to invention that cotton has been from the day that men began to wear cotton clothes.

The textile engineering department of the Agricultural and Mechanical College of Texas will open in October. Texas is the fifth Southern State to provide such a department in its educational system, the others being North Carolina, South Carolina, Georgia and

Mississippi. All have been created in response to a strong demand that young Southerners have opportunity in their own States to train themselves for leadership in the industrial department of their section.

REACHING OUT TO THE GULF.

The incorporation of a railroad at Savannah, Ga., to build a line from there to some point on the Gulf coast in Florida directs attention to the leading part which ports on the Gulf are expected to play in handling the commerce of the future. This expectation is evidenced by a general desire among neighboring railroads to reach Gulf outlets, and also by the incorporation of new companies to build lines thither. This latest Gulf road project of importance is the South Atlantic & Mexican Gulf Railway Co., the list of its incorporators being headed by the name of Capt. D. G. Purse of Savannah, who, as heretofore noted, has written the Manufacturers' Record that the money is provided for building the line, and that satisfactory progress with the plan has been made.

Another recent project to reach the Gulf is that of the Kansas City, Oklahoma & Eastern Railway, which is said to be backed by the Chicago, Burlington & Quincy, evidently with the desire to rival the Rock Island by obtaining an outlet to the Gulf. Still another company lately chartered is the St. Louis, Little Rock & Gulf Railroad, proposing to build from St. Louis via Little Rock to Sabine Lake, Texas. A fourth road is proposed by the Gulf & Pacific Railway Co., which is planned to run from Paris, Texas, to Velasco, Texas.

Not only are these new companies and others projected some time ago reaching out for Gulf ports, but existing corporations propose large improvements at their Gulf outlets. For instance, the Southern Railway and the Frisco system are jointly concerned in the great terminal plans of the New Orleans Terminal Co. In addition to this, the Louisiana Railway & Navigation Co., which is building toward New Orleans, has a big river terminal plan under way for its use in that city. The Gulf & Ship Island Railroad is also going ahead with its development at Gulfport, Miss., and the lines entering Pensacola, Mobile, Port Arthur and Galveston have also more or less improvement work under way, so that it appears probable that the expenditures during the next five years for the development of transportation facilities to ports on the Gulf will reach a very high figure.

While the determination to build a Panama canal has lately directed particular attention to the value of all harbors along our Gulf coast, it must be borne in mind that the development of these ports is not being brought about solely because of their proximity to the proposed artificial channel which will connect the two great oceans, but is mainly on account of the fact that lines to the Gulf give in many instances the shortest routes to tidewater from the wheat fields, the mills and the packing-houses of the West. This has resulted in a great increase in export traffic through the leading Gulf cities, and circumstances point not only to a continuance of this remarkable growth, but towards the development of other ports by the improvement of existing lines of land transportation and the building of new ones. At present this export traffic is moving principally toward Europe, but the time is apparently not far distant when a great percentage of it will go through the canal down the west coast of South America, to Hawaii, the

Philippines and the Orient. Much of this traffic will therefore be composed of Southern cotton, rice, sugar, oil, naval stores and lumber, as well as of grain and meat products from the West.

As the prospects of the Gulf ports are considered no dream of the future concerning them appears too rosy. Not that the Gulf coast will draw from the Atlantic seaboard the traffic that it enjoys, but that the Gulf will grow and expand with that traffic, export and import, which will be naturally its own. The shortest haul to tidewater will undoubtedly command the export and import business of the extensive regions now under development in the Indian Territory, Oklahoma and Texas, and it will also attract a large proportion of the vast trade in the Mississippi valley, besides much of the business of the Alabama and Tennessee mineral regions. The trained intellects which govern the transportation systems that reach toward the Gulf have realized the truth embodied in this promise of the future, and are preparing, by new construction and otherwise, to be ready to enjoy its harvest to the full.

COLORADO AS A LESSON.

Acute industrial and social conditions in Colorado should not be without beneficial effect upon the whole country. Deplorable as they are, they strikingly illustrate the unvarying law that disregard for law and for the rights of others on the part of one group of individuals finds its equal in like lawlessness on the part of others, with anarchy consequent. If American institutions are to be preserved for the good of mankind, the lesson must be taught that no man or no group of men at either extreme in industrial society shall be permitted to be above the law. That lesson is being enforced by the experience of Colorado.

At this distance, and dealing with acts extending over several years, it may be impossible to discover the original causes of the plight in which the State finds itself. But it is undeniable that a mightily contributing cause has been the revolutionary attitude into which organized miners have permitted their radical advisers and leaders to place them. In their determination to prevent freedom of contract except for their limited class they have been drawn into crimes against the individual and crimes against society shocking in the extreme. Making through their terrorizing methods their influence to be felt grievously in politics, trade and ordinary social relations, they have naturally led desperate citizens to combine against them. Hence is presented the spectacle of the Citizens' Alliance preparing to destroy the trades-union system, and, to that end, doing all within their power to make it impossible for the member of a union to live in Colorado.

However great the provocation, such tyranny on the part of one body of men opposing the tyranny of another body cannot be justified by the really law-abiding. It is just as fundamentally wrong to attempt to prevent a man from making his living because he is a union man as it is to attempt to deprive him of employment because he refuses to join a union and prefers to work as long and for the wages that he sees fit. For any body of men to interfere with a man's right to work as he pleases, as long as he is a law-abiding citizen, be he union or be he non-union, is a blow at American principles; it is a denial of the freedom of the individual, which should be subject only to the law of the land. A blow at that freedom is a blow

at law, no matter what may be the provocation, and a supreme question before citizens of this country today is that of maintaining law. What has happened in Colorado may be duplicated at any other part of the country under another form. Violence by one organization will certainly be met with violence by another in opposition, and in the consequent anarchy the great mass of the public belonging to neither organization must suffer. It is for that public to compel the officers of the law to sustain at all hazard the supremacy of the law.

TO ENSURE ACCURACY.

The Manufacturers' Record is always glad to receive suggestions or criticisms, and especially glad to have its attention called to any mistakes made in its Construction Department. Only in this way are we at times able to discover errors. But a good many manufacturers and others who use our Construction Department in order to get in communication with new enterprises leave the addressing of their correspondence to clerks with very little judgment, and the result is that errors are made, due entirely to the carelessness of the clerk rather than to the Manufacturers' Record. This is illustrated in a batch of six envelopes sent to us by an elevator manufacturing concern in the West, who addressed letters to people mentioned in the Construction Department, and not being found, the letters were returned. The company sent these to us as indicating their inability to find the people mentioned in our construction news. In every case the mistake was theirs. The reply to their letter may suggest to others the importance of more care in following up such correspondence. Replying to their letter the Manufacturers' Record said:

We have received without explanation portions of several envelopes showing your business inscription which have been returned to you by the postal authorities, and assume that they were sent to us to investigate. We have carefully looked up each of these items and report as follows:

"John Henderson, 34 East Pratt street, Baltimore, Md.: Mr. Henderson's address could not be ascertained, but we stated in the item that Burnham & Wells and McIver & Piel, located in Builders' Exchange Building, Charles and Lexington streets, should be addressed."

"The Gerke Estate, Baltimore, Md.: This item showed that Charles E. Cassell & Son, Charles and Saratoga streets, Baltimore, the architects, and John Hiltz, 3 Clay street, Baltimore, Md., the contractor for the building, should have been addressed."

"The Southern Methodist Publishing Co., Baltimore, Md.: This item showed that Rev. John A. Anderson, 1605 Harlem avenue, Baltimore, Md., was one of the incorporators, and should have been addressed."

"Maryland Fireproofing & Paint Co., Baltimore, Md.: This item showed plainly the address of this company at 401 Fidelity Building and warehouse at the corner of Pratt and Greene streets, Baltimore, Md. Your envelope contained no street address."

"R. L. Thompson, Chattanooga, Tenn.: This item showed that Mr. Thompson's address was Detroit, Mich.; his factory to be located at Chattanooga, Tenn. He should, of course, have been addressed at Detroit, Mich."

"The Henkleman Estate, Baltimore, Md.: This item showed that William Ferguson & Bro., 214 Clay street, Baltimore, Md., have received the contract for erecting this building, and they should have been addressed."

If proper care and judgment had been exercised in addressing these several communications, following the specific information contained in the items, your letters would have reached their proper destination. It is very evident that whoever addressed these envelopes did not carefully read the items and exercised little or no judgment in addressing your envelopes. In this connection we call your particular attention to our standing statement at the head of the department containing these items that if the general instructions in this statement are followed letters will in nearly every instance be delivered.

TALKING UP ONE'S TOWN.

In a letter to the Manufacturers' Record Mr. George R. Brown, secretary of the Board of Trade of Little Rock, Ark., calls attention to a circular which is going to all parts of Arkansas, and he says: "You will see that we are not asleep when it comes to looking after our trade." Anybody who has followed the work of the Little Rock Board of Trade in recent years knows that that body is wide-awake not only in looking after the trade of the city, but in leading all movements for the development of the State. A specimen of its work is the circular to which Mr. Brown directs attention, and which reads as follows:

Even a glance at the city of Little Rock presents a scene of unparalleled prosperity—a great community of live, wide-awake, energetic and successful people. There is today probably no city of equal population in the United States more prosperous. On every hand are the evidences of it, and in the great building rush every branch of development is to be witnessed. The new million-dollar State Capitol is progressing rapidly, the quarter-of-a-million-dollar hotel is a "go," and the one-hundred-thousand-dollar high-school building is a certainty. There are also hundreds of residences in the hands of the contractors, and many buildings for stores and factories—in the latter class the four-story granite brick building of the Little Rock Furniture Manufacturing Co. Among those in the former class recently completed is the great warehouse of the Gus Blass Dry Goods Co. and the mammoth stores of the Jones Housefurnishing Co. In other lines of development attention is forcibly directed to the many miles of extensions of the street-railway system, the contracts for asphalt street paving, the hundreds of miles of concrete sidewalks, the work of the heating company, the new railroad to the south, the new elevators for the Rosenbaum Grain Co. and T. H. Bunch & Co., the new electric power-house, the massive building for the Dickinson Hardware Co., the movement for an auditorium and office building, both of which beyond doubt will meet with favorable results, and also the re-establishing of river transportation to points on the lower Arkansas and the Mississippi. All in all, prosperity is at high tide in the metropolis of the best State in the South.

These are significant facts. They illustrate the advantage of a city's making known what it is doing as the promise of what it can still further do.

The Southern Machine Manufacturing Co., Inc., gasoline motors, automobiles, etc., Richmond, Va., writes to the Manufacturers' Record as follows:

We consider your paper the peer of trade papers in this country, and your Daily Bulletin indispensable.

Glass Sand in Texas.

Chester L. Wise of Pittsburg, Pa., an authority on the manufacture of glass, has been in correspondence for some time with Mr. J. F. Zang of Dallas, Texas, relative to the establishment at that place of a glass factory. He has been investigating deposits of sand in the vicinity of Dallas, and he says that if he finds the conditions at Dallas favorable he will establish there a \$100,000 factory with an output of 100 cars annually and giving employment to 150 men and boys.

Growth of Fort Worth.

When Fort Worth, Texas, contracted about a year ago for its present water-works system it was thought that it would be sufficient to meet the demands of the city for five years. The increase in population has been so great, however, that immediate steps have become necessary to augment the supply. Chairman J. F. Lahane of the water-works committee of the city council says that the limit of 3,000,000 per day will be reached some time this summer.

Two Baltimore firms have been awarded the handling of contracts for 10,000 pounds of Maryland tobacco for the French government.

SELF-RELIANCE IN EDUCATION.*

It has been said that "the world reserves its prizes for but one thing, and that is initiative." The same writer defines initiative as "doing the right thing without being told." But something more than initiative is needed, and that is self-reliance, self-respect, backbone. This is true of a country as well as of an individual. One of the humorists of the day says there will soon be but two classes of people in this country—those who ride in automobiles and those who dodge automobiles, but the real designation of the two classes into which the world always has been and always will be divided is the burden-bearers and the burden-shirkers. On one side are those who have both initiative and self-reliance; on the other side are those who have neither. Those of one class create, they bring things to pass, they carry the burdens of others as well as their own, and in doing this they strengthen and develop every latent power; those of the other class lack initiative, lack self-reliance, lack backbone and throw upon others every burden which they should carry. In doing this they steadily lessen their own virility. The unused faculty atrophies and dies. Your future will depend upon the development of your initiative faculties, of your self-reliance and of your burden-bearing abilities. Rest assured that if you look to others to do for you the things which you should do for yourself, if you look to others to bear your burdens and responsibilities, if you look to others for initiative, you will never measure up to your opportunity, and to all intents and purposes your life will be a failure. This school, as I understand its work, stands for self-reliance—self-reliance in the boy who works his way through college, as well as self-reliance in doing its own work, preferring to build slowly rather than to be known as a seeker after alms from outside. It prefers to bear its own burdens rather than to ask others to bear them.

On the same ground I am opposed to the system of begging donations from the rich men of the country for Southern education. Moreover, the South is abundantly able to educate its own people, and the education which it will get in initiating and developing its own burdens will alone be worth more than would be all the uncounted millions even if ever received of which we have heard so much of late years as promised to Southern education, but which so far have not materialized. The South has the wealth of brain and money to develop its own educational system, but unless it develops its own initiative, its own self-reliance in this work, if it looks to others to initiate for it, to bear its burdens, then just so surely as the sun shall rise tomorrow will it become a burned-shirker, mentally, ethically and financially. With its own inherent powers, its initiative, its self-reliance—not fully developed, it may be, but capable of the broadest development—gradually fading away, we shall see planted in the very beginning of educational and national life, even in the boy and girl in the primary school, the seed of a deadly poison that the South can do nothing of itself: that its educational work can only be advanced by the incoming of philanthropists and teachers from other sections, or by national aid to educational work. Taught to shirk our duties, taught to cast on others our responsibilities, we shall become a people lacking in initiative, lacking in self-reliance, lacking in backbone, lacking in burden-bearing qualities, and then shall we as a people seek to shift to other shoulders the bur-

den of doing our whole duty in the education of whites and blacks.

I said the South is abundantly able to do its own educational work. This is true, and dependence upon outside suggestions or help will not only be fatal to our self-respect and to our self-reliance, but fatal to our own material advancement, for growing weaker under such a policy instead of stronger, we shall become the hewers of wood and the drawers of water for those who shall come in and possess the land. It is time to stop crying poverty; it is time to realize what we have and to utilize our wealth for all our needs; it is time to stop being pessimistic. The pessimist has been described as a man who, having the choice of two evils, prefers to take them both, and this is what many Southern people have been doing. Too long have we been pessimists. The wealth of the South today, with its population of 25,000,000, is equal to the wealth of the United States, with its 31,000,000, in 1860. The South is now mining 10 times as much bituminous coal as the United States mined in 1860, it is making six times as much pig-iron, its output of oil is 80 times as great as that of the whole country then, its lumber output is more than dou-

ble, its railroad mileage is twice as great, and its total wealth is over \$16,000,000,000, against \$16,100,000,000 for the whole country in 1860. I have no word of criticism against the good intentions of many of the kindly-hearted Northern philanthropists who are furnishing the money for an educational propaganda in the South. Many of them mean well, but so may the captain, who, ignorant of the coast and without chart or compass, drives his ship to wreck upon the rocks. Good intentions are no proof against fatal blunders. The way to the lower world is said to be paved with good intentions. Even a clear conscience is no assurance of right doing, for conscience may not have been rightly educated. But it is not against these outside philanthropists that I would so much utter a warning as against ourselves. It is against our fatal mistake should we look to others for initiative and guidance and financial help in our educational problems that I would raise a warning voice.

If the South of the future is to be worthy of the glorious record of the Old South it must be the strongest, the most self-reliant country of the world; it must be a leader, an initiator, not a follower; it must be a burden-bearer, not a burden-shirker. Its men must be real men—men who think for themselves, men of broad views and men of backbone.

Pig-Iron Warrant System and the Foundry.*

By GEORGE H. HULL, President of the American Pig-Iron Warrant Co.

The proposed letting of a contract for a large amount of castings to be used in connection with the Pennsylvania tunnels in New York, deliverable over a period of four years, has for several months been a topic of much discussion among iron foundrymen, and the would-be contractors have found embarrassment over the question of how to protect themselves in making a bid at a fixed price, and for fixed dates of delivery, over so long a period, in face of the well-known irregularities which in the United States attend the supply of pig-iron, both as to price and deliveries. With the experience of the last five years fresh in mind, during which iron advanced to \$25 per ton, and the stock held by all the merchant furnaces was on two occasions reduced to less than 50,000 tons, the idea of making a contract for 300,000 tons of castings, with fixed dates of delivery, seemed like tempting fate. If, for example, the furnaceman with whom the foundryman has made his contract for pig-iron should for any reason beyond his control be unable to make or deliver the iron at dates specified, and iron should again be scarce and high, it is impossible to tell how serious the result might be.

The custom prevalent among foundrymen in the United States of taking contracts for castings, deliverable on fixed dates, over long periods, and at fixed prices, and of relying for their materials upon a contract with iron producers, which contains a clause reading as follows, "shipments and deliveries subject to strikes, accidents, deficient transportation and all other causes beyond our control," seems to the mind of the Scotch foundryman to voluntarily invite disaster. The possibility of a strike in his own works he recognizes as a risk of his own, and one which he cannot avoid, but the idea of doing business on the basis of assuming everybody else's risk all down the line he does not comprehend.

If the foundryman allows the strike or accident clause to be inserted in his contract for pig-iron, ordinary prudence would prompt him to require it in his contract for castings, and so must each

one all along the chain of producers and consumers. Anyone who omitted to do so would take a double risk. Under such a custom everybody becomes relieved of the necessity of making deliveries on time through either his or anyone else's embarrassments, and as soon as this becomes general a labor leader in any one branch of the industries may control all the productive industries of the country. A steamship in progress of building, for instance, would progress towards completion only when labor in all the trades which furnished any material for that steamship graciously permitted it to do so. Labor leaders already have power enough, without such aid from employers. It is, fortunately, often impossible for the labor leaders in one trade to induce other trades to join in a sympathetic strike, but just to the extent that employers accept this strike or accident clause they hand themselves over "bound hand and foot" to the mercies of the labor leaders of every trade which is in any way connected with their own.

But this is not the only evil encouraged by this strike or accident clause. It is probably the most potent means which could possibly be devised for discouraging the accumulation of reserve stocks of raw materials. If the sellers of pig-iron, for instance, were not permitted to embody this strike or accident clause in their contracts—that is, if the consumer would accept only contracts for iron which required positive delivery at times specified—then the sellers, through ordinary prudence, would be forced to carry a reserved stock sufficient to enable them to make deliveries through any ordinary period of interruption which might take place in their works; and these reserve stocks, if thus accumulated in every branch of manufacture, would not only be a great boon to all the constructive industries of the country, but they would go far towards discouraging labor strikes within these industries. Hon. Carroll D. Wright, United States commissioner of labor, when he visited New York in the winter of 1903 as the representative of President Roosevelt to investigate the anthracite coal strike, said to an enthusiastic exponent of the reserve-

stock system that if the operators in the United States had carried out this gentleman's theory of accumulating large reserve stocks of coal there would probably have been no strike. Whether to strike or not to strike usually depends upon the visible chances of success. In whatever branch of production the strike is contemplated, success depends largely upon the reserve supply of the product immediately involved. If the stock be small, the necessities of the community go a long way towards forcing the producers to resume work, even to the point of conceding to unreasonable labor demands. On the other hand, if the stock is large, that one fact will almost certainly prevent a strike, unless it is founded on some good and sufficient reason.

In this country, under the existing conditions, the only way a foundryman can make a contract for a large amount of castings, deliverable over a long period, and be sure of having the required amount of pig-iron when he needs it, is to buy it out and out and pile it in his yard at the time he makes the contract. But this would tie up an unreasonable amount of capital and occupy too much of the consumer's yard space. The producer, on the other hand, has no incentive to pile iron. He may contract his anticipated product for months ahead, deliver it on these contracts as made, and if anything beyond his control prevents his producing it he is relieved from delivery by the strike or accident clause. He may sell his expected output a year ahead if he chooses, and not be obliged to carry a single ton of stock. What is the result? No one carries any stock which he can avoid, and when each period of prosperity returns to the country the whole fabric of business is hampered, delayed and disorganized by the famine in iron; prices soar to fabulous heights; all other materials follow in sympathy; laborers strike all the way up to get their share of the good times, and afterwards all the way down to ward off their share of the bad times. Eight times within the last 80 years this country has suffered from an iron famine. Everyone who had work which required iron was behind, and the whole business of the country was delayed in consequence of the scarcity of this one article.

If you think I am giving too much importance to iron, remember it is the foundation of all the mechanical industries. Look about you, out of doors or in, can you see any article of value produced by man which is not fashioned with the aid of iron? The food you eat is cooked in iron utensils; the clothing you wear is woven by iron machinery; it is necessary to every step of progress. If you double the mechanical industries you double the wear and tear of iron and the demand for it. Remove iron, and you paralyze the commerce and industries of the civilized world. Is it too much to say, then, that an advance of 100 per cent. to 300 per cent. in its cost will derange and discourage the industries of which it is the foundation? There is no other staple which cannot be supplied quickly enough to meet any increased demand of 100 per cent. which may come. To meet a corresponding increase in the demand for iron is impossible. It therefore becomes evident that these abnormal and injurious advances can be modified only by accumulating in dull times a surplus stock of iron to be carried as a reserve supply for use in active times. It is no more overproduction to accumulate during seven or eight years of dullness enough iron to supply the demand during the succeeding two or three years of activity than it is to accumulate during the three months of harvest enough grain to supply the demand during the remaining nine months; it only requires that the mind shall become accustomed to it to

*From an address made by the editor of the Manufacturers' Record at the commencement of the Virginia Polytechnic Institute at Blacksburg.

*A paper read before the American Foundrymen's Association.

fully accept it. Just before the last boom we were holding less than 1,000,000 tons of reserve stock of iron, and from 1800 to 1897 had produced about 9,000,000 tons per annum. If we had held a reserve stock of 37,000,000 tons in 1897 and had continued to produce 9,000,000 tons per annum it would all have been consumed to-day. Think of the absurdity of crying overproduction with but 1,000,000 tons of iron in stock on the eve of a period of prosperity which required an additional supply of 37,000,000. Is it any wonder that the stock during the last six years has often been down to less than a day's product, and that the iron consumers suffered?

If the consumers of this country are in the future to be protected as to their supply of iron, they must protect themselves as is done in Scotland. They cannot expect the producers to do it for them. If the producers sell them iron deliverable 6 to 12 months ahead, they must either protect themselves by storing the iron or demand a contract with the accident and strike clause. No prudent furnaceman would do otherwise; and yet to continue this custom is to insure a continuance of the known evils of the past.

A contract with a strike or accident clause is worse than no contract at all. It is a promise with an "if." When the "if" is not called up you could do as well without the contract as with it. When the "if" is called up you are left in a tight place, with no one under obligation to help you out. Without such a contract you would probably have bought and piled up the iron to protect yourself. Of all the delusions and snares which attend the business system of this country, I know of none in appearance so harmless and yet so blighting in effect.

What the foundryman in the United States most needs is a system whereby he can purchase his iron at a fixed price, and far in advance, with the certainty of obtaining it when needed without tying up his working capital, and without piling up a surplus quantity of iron in his own yard. The Scotch warrant system has satisfied this same need in a perfect manner for 50 years, and it is for this reason that it has become the established system of that country.

In Scotland, when a foundryman takes a contract for a large amount of work, deliverable over a long time, he goes directly to a warrant dealer and makes a contract for warrants for a corresponding amount and time of delivery. These contracts have no strike or accident clause; they are positive, and must be kept, or the seller must suffer the loss entailed. A warrant dealer in Scotland will sell protection to a consumer for five years ahead just as readily as he will for six months or a year. The charge he makes for such protection is based on what it will cost him to buy iron by warrant the day he makes the contract and carry the same to the date of deliveries called for by the contract. When the warrant dealer enters into a contract to protect a consumer in this manner he must necessarily buy warrants to protect himself, and as long as the contract of protection runs he must own and carry warrants to protect himself. By this system the capital and space necessary for perfect protection to the consumer is provided at a reasonable cost and without his depriving his business of either the capital or yard room required. The establishment of the warrant system was as great a relief to the iron producers and consumers of Great Britain as was the establishment of the national banking system to the financial exigencies of the United States. One created a demand for bonds which never before existed, the other created a demand for iron which had never before existed; one necessitated the carriage of

bonds by every national bank, the other necessitated the carriage of iron by every warrant dealer. It is through this necessity for carrying a reserve stock as a protection that Scotland accumulates 6 to 12 months' supply of iron, while the United States but three to six weeks' supply.

How are the American foundrymen to bring about in this country the condition existing in Scotland? I expect Americans will have to bring it about substantially just as the Scotchmen did—that is, they will, in the beginning, have to buy and carry warrants for a moderate amount as a reserve stock until the business of selling protective contracts becomes an established business. We have to begin with—already in existence—the American warrant. This warrant is simply a negotiable warehouse receipt, which describes the brand, quality, amount and location of the iron it represents. Warrant iron is graded either by analysis or fracture; when by analysis it is according to the rules adopted by the American Foundryman's Association. Each warrant is for 100 tons of 2240 pounds, and the warrant company is responsible for the brand, grade and weight described on its face. Every warrant is registered by a trust company of high standing, and no iron can be delivered from warrant yards without the signature of the trust company and the president and secretary of the warrant company.

In Scotland, at the start, foundrymen who made large contracts for work bought and carried warrants to protect themselves. By this means they held a reserve supply, which was always available in an emergency. Firms of large responsibility found it easy to carry these warrants in bank, but it was not so easy for the small and less responsible ones, who needed the protection just as much as the large ones. Through this condition iron dealers commenced to make contracts for warrants with the consumers to protect them against advances and famines in iron. When the dealers entered into these contracts to protect the consumer they were obliged to buy iron warrants to protect themselves. This business proved so acceptable to all parties that it grew rapidly and soon necessitated large purchases and large carriage of warrants by the iron dealers. Thus the system came into existence in Scotland in a natural way, and I see no way in which it can be brought about in the United States except in a like manner.

If the foundrymen of this country would introduce the Scotch warrant system and thus obtain certainty, instead of uncertainty, in their iron supply, they have only to refuse to accept contracts with the strike or accident clause, and if in the beginning they cannot procure binding contracts, then buy and carry warrants themselves as a reserve for a moderate amount. Just as soon as the sellers realize that the consumers will buy only by positive contracts someone will be only too glad to sell them in that way, and whether this selling is done by the producers or dealers does not matter, as whoever does it must carry iron either by warrant or in some other manner to protect himself. When this is done, however, the consumers must recognize the fact that whoever sells the positive contracts takes a risk, and is giving the consumers a protection which is of value and for which they must be willing to pay a reasonable amount, just as they do for marine or fire insurance. The little you pay for it will be returned tenfold in time. There is an impression among many that in Great Britain consumers purchase the iron they consume by warrant. This is a mistake. Consumers there buy nearly all the iron they use from the makers or their agents, as they do in this country. The warrants which the

consumers contract for as protection are to them nothing more than protection. As the months roll by they purchase the iron or steel they wish for their work of the brand, quality and shape they require from whomsoever they can make the most satisfactory terms, and simultaneously sell on exchange an equal quantity of warrants. If iron has gone up, say, 20 shillings, they pay that much more for their material and get about that much more for their warrants. If iron has gone down, say, 10 shillings, they buy their material for that much less and get about that much less for their warrants. In this manner they eliminate any speculative element from their business and thus insure their legitimate business profits.

If the iron famine of the last five years had been the only one the country had suffered from since foundries existed it might reasonably be supposed that we would not experience another; but such is not the case. Eight times within the last 80 years these famines have occurred; eight times the iron consumers have been hampered and impeded in their business, often sustaining heavy losses as a result of this grievous condition.

Statistics show that the population of this country not only increases enormously, but the per capita consumption of iron increases at a cumulative rate. We consumed about 100 pounds per capita in 1855; 300 per capita in 1890, and 500 per capita in 1902. It further shows that this twofold increase doubles the consumption about every 10 years, but the yearly increase is not proportionate, for seven or eight years' consumption remains practically on an even plane, then it receives an impetus which causes it to be doubled within two or three years, during part of which time we experience what has been designated as a pig-iron famine. After such periods of famine the succeeding seven or eight years of dullness and plenty lull us into a delusive feeling of security.

For 40 years the late Hon. Abram S. Hewitt predicted these enormous increases, and they have always been verified. Recently Mr. Edward Atkinson has predicted that the consumption of iron in the United States will reach 40,000,000 tons per annum between 1910 and 1913. This prediction, like those of Mr. Hewitt, is not a fanciful outburst of imagination; it is simply the result of a mathematical calculation based upon the exact growth of the past, and its fulfillment is as assured as is the future growth and expansion of the country. The law of supply and demand is inexorable. The supply of iron for any given period is the stock on hand at the commencement of that period added to the current production during the period. If in 1910 the stock on hand is 1,000,000 tons, the production 18,000,000 and the demand is 40,000,000, then the supply will be 21,000,000 short of the demand the first year of the boom, and no human power can prevent another iron famine, another violent advance in the price of this metal and all the attendant evils.

The past we cannot recall, but we may profit by its lessons. If we permit the same conditions which have existed for the last 80 years to continue, we will experience the same results. 1897 seems a very little while ago; to 1910 will be a still shorter period, hardly time to prepare. If we are to be ready for the next boom, we cannot commence too soon or work too fast.

Messrs. B. B. Duke and J. B. Duke, it is announced, have given a \$50,000 tract of land and \$50,000 in cash on condition that the Methodists of North Carolina shall give \$50,000, the aggregate donations to be used in founding a woman's annex to Trinity College at Durham, N. C.

OF MORE HOPEFUL TINGE.

The Outlook in the Birmingham Iron Market.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., June 13.

As to the price of iron the market for the past week showed but little variation from previous reports. But there was a materially better inquiry and the increased transactions were notable, not only for their numbers, but also for their volume. Some large buyers were in the market, but the majority failed to secure the low values for which they contended, and pulled out to resume their policy of masterly inactivity. But there were some who took enough iron at current market to give a more hopeful tinge to the outlook. One interest in the central West, after several days of inquiry, finally concluded to accept the situation, and placed an order for about 12,000 tons, the shipments being strung along to cover pretty well the third quarter of the current year. The lot included two grades, one of them being gray forge. Your correspondent was assured that the price obtained was on the basis of \$8.50 for gray forge. According to the usual rule of estimating difference in price as to grades, this may mean \$9.50 basis of No. 2 foundry, or it may mean a 25-cent less basis, as the usual difference between the lower grades are not rigidly adhered to. There is a grapevine report that the order carried with it certain conditions as to analysis. Anyway, the placing of the order gives a needed encouragement to the trade, and it is regarded as a precursor of a largely-increased business. There were other sales of lots running in magnitude from 2000 tons down to 1000, and to car-load lots, on the reported basis of \$9.50 for No. 2 foundry. There were reported several sales of special analysis iron, which aided in giving the market some steadiness.

Your correspondent saw several sales for Western account recorded on the basis of \$9.50 for No. 2 foundry, and also saw numbers of orders entered at 25 cents less. The larger interests are the firmest holders, and they assure your correspondent that they are not in the market on any less basis than \$9.50 for No. 2 foundry. There is plenty of evidence as to the correctness of this statement. There were sales in limited lots to what may be styled the mail-order trade at prices a little above what would be quoted for round lots. To this element some No. 1 soft went at \$9.75, and both No. 2 soft and No. 2 foundry went at same price. Some also went at \$9.50, the terms and conditions of sale influencing the price. There were sales of No. 3 foundry at both \$9 and \$8.75 in varying lots as to magnitude, and there was one sale of 1500 tons of No. 4 foundry at \$8.50. It is understood that none of these sales as to delivery extended beyond the third quarter.

It looks a little queer that buyers should pass by offerings on the basis of \$9.25 for No. 2 foundry and buy at 25 cents higher. The explanation is that buyers of important lots, when they enter the market, want their requirements filled at one given price, and where they want an assortment of grades they must go where they can find the quantity. One interest showed that in the past 10 days it had sold nearly 3500 tons on the basis of \$9.25 for No. 2 foundry, while another interest reports sales of over 2000 tons on the same basis. The inference is clear as to the condition of the market.

Some more export orders were worked the past week, but they covered only 1000 tons. More could have been taken and more would have been taken if shipping conditions had been favorable. The price obtained, your correspondent is assured, was fully equal to the top prices to the domestic buyers.

One sale of 300 tons of No. 2 soft carrying 3 per cent. silicon at \$10 should be reported as showing the variation in price. This sale was on analysis conditions, and indicates a market phase. It was top price.

The sale of the Means-Fulton Iron Works to parties from Portsmouth, Ohio, has been concluded, and the purchasers will take possession at once. A part, if not all, of the machinery of the Portsmouth Machine & Foundry Co. will be moved to this place and added to the purchased plant. It will be conducted on the same lines of output as heretofore, and the capacity will be materially increased.

The Bartlett-Tewksberry Company has filed articles of incorporation, and will be located at East Birmingham. It is capitalized at \$25,000. Its specialty will be the making of saw-mill machinery and engines. T. E. E. Bartlett is president; F. S. Young is vice president, and J. W. Tewksberry is treasurer.

Interest is being revived in the gold fields of Eastern Alabama, and Pennsylvania people have undertaken development. They have purchased several hundred acres in the Arbacoochee field, and have ordered an equipment that will cost about \$160,000. The prospect must be good for satisfactory results if the amount invested is any criterion. There will come a time when the gold fields of this State will rank in profitable output fully up to if not beyond that of the iron fields.

J. M. K.

AROUND BIG STONE GAP.

Coal and Iron Interests of Southwest Virginia.

[Special Cor. Manufacturers' Record.]
Big Stone Gap, Va., June 9.

While the coal interests in this section are languishing, and in some instances almost stagnant in already established mines and plants, continuous development is in progress.

In the Wise county fields none of the operations are working to their full capacity, and nothing in the future outlook has a cheerful aspect at this present writing. The general business conditions in the country must change before much can be hoped for. In this comparatively new field, one of the most promising in the country, there are already some 3000 coke ovens. The coal is particularly fine, and there is an inexhaustible supply suitable for all possible uses. The Tom's Creek operation is the largest in the field, having 800 ovens. This and the Inman operation, with its 174 ovens, is the property of the Virginia Coal, Iron & Coke Co., and are great factors in the development of these interests. The Stonega Coal & Coke Co., 666 ovens; Dorchester, 450 ovens; Osaka, 300 ovens; Blackwood, 200 ovens; Norton Coal & Coke Co., 110 ovens, and more being built, and Glamorgan, over 200 ovens, are all doing their part in their particular lines. The Big Stone Gap, Imboden and the Kelly & Irvin operations are also striving to their best in adding to the general enhancement of their interests in this section.

In connection with the operations in Wise county, Mr. George L. Carter, the promoter of the Virginia Coal, Iron & Coke Co., who owns large coal interests in this section, since he left the Virginia Coal, Iron & Coke Co. has been arranging, and with every prospect of success, to get up a connection from the Big Stone Gap coal section to Johnson City via Bristol, to connect with the South & Western and finally with the Seaboard Air Line in North Carolina. This will be a most valuable achievement, offering every facility for shipments to the seacoast.

The Intermont Coal & Coke Co. is a comparatively new operation, which has

been shipping about a year to the West generally. The Josephine mine is its property. It has 60 ovens, and a very low sulphur coke of good structure is being made; output about 3500 tons per month. Labor is at times somewhat scarce, but on the whole little difficulty is had in procuring what is needed. There are at this time many opportunities for investment in iron and coal on the south Virginia side of the Cumberland range. The iron business has been very much neglected in this part of the country. There is only one furnace in this section, owned by the Union Iron & Steel Co., which is entirely inadequate to meet the demands made upon it for the consumption of the ore. Messrs. Kelly & Irvin have two mines with capacity of 200 tons per day, which can be increased to 350 tons within the coming 12 months. They also own adjacent properties from which they could produce an unlimited supply. Beyond all doubt this country would become a second Birmingham district under proper development. Two of Messrs. Kelly & Irvin's mines are shut down on account of there being no market, the small 80-ton furnace, before mentioned, not having the capacity for using one-tenth of the ore which could be produced in this section. Now, if ever, is the time for the construction of several furnaces of large capacity.

The latest operation in this section is the Darby Coal Co., near Pennington Gap railroad station, which began its output within the past month. A railroad seven miles long, a spur of the Louisville & Nashville Railroad, is being constructed at a cost of \$200,000.

Within the next three months the road will be in readiness for receiving the output from the mines. Miners are at work, the commissary building completed, and contracts are being made for fall delivery. The output is steam coal of fine quality, and arrangements are being effected for transporting same to the Atlantic coast via Charleston. This is seemingly a most vigorous infant, which sooner or later may assume very gigantic proportions.

The Imboden Coal Co. and the Imboden Coke Co. own together about 800 acres of coal property on Pigeon creek, about four miles from Big Stone Gap and about two miles from the junction of the Louisville & Nashville Railroad and the Virginia & Southwestern Railway.

The property of the Imboden Coal Co. comprises about 750 acres, and that of the Imboden Coke Co. about 50 acres, and upon the latter acreage most of the plant of the coke company is constructed. The Imboden Coke Co. is the operating company, and leases the coal company's property upon a royalty basis. The plant consists of 289 beehive coke ovens, of which 250 are completed, while material is upon the ground for the completion of the remainder, the foundations for which have been constructed. The capacity of the mines at this time is about 1200 tons per day. The coal is taken from what is known as the "Imboden seam," and affords an excellent steam, domestic and coking coal. The vein has an average thickness of about seven feet. The Imboden Coal Co. owns two miles of railway, connecting the plant with the Virginia & Southwestern Railway Co.'s main line, and has trackage rights to reach the Louisville & Nashville Railroad at the junction point. This plant has been in operation since November, 1903, and is said to be one of the best equipped and most modern in the district, and susceptible of as economical operation as any other plant in that section.

I would add that there are two very important industries in Big Stone Gap which are owned by the United States Leather Co., one being a tannery turning out some 100 hides per day, and the other an ex-

tract plant making tannic acid from chestnut wood, using up each day between 75 and 100 cords.

WM. M. PEGRAM.

Pig-Iron Market.

Matthew Addy & Co. of Cincinnati in their weekly report say:

"There have been no developments of any particular moment in the pig-iron market during the past week. Business has been going on in a quiet fashion. There has been, however, some very fair buying, and there is a noticeable increase in inquiry as we approach the middle of the year. This applies not only to pig-iron, but to coke. Consumers are covered up until July 1, but beyond that time they have no open orders for their raw materials. Of course, there is no denying that there are a great many consumers who seem to feel that they are going to remain in the doldrums until the questions of the crops and the presidential election are settled. This sentiment leads to buying for short deliveries only, and a great deal of the business which has been done lately has been made up of more or less small quantities for immediate shipment. The market does not show any signs of a weakening tendency. Prices are low, but there is no particular reason to expect that they will be lower, for manufacturers are already in many cases not only selling their iron without a profit, but at an actual loss. For pig-iron to go lower would mean ruin. So the manufacturers contend that they have reached the bottom, and that there is no subcellar, so to speak. Several of the very largest producers in the country have flatly announced that they will blow out the furnaces before they will sell for a penny less than they are now receiving."

IN TEXAS OIL FIELDS.

Shipments to the Standard Through Security Company's Pipe Line.

[Special Cor. Manufacturers' Record.]
Beaumont, Texas, June 12.

There has been little change in the general situation in the oil fields of Southeast Texas during the past month. Prices have ruled steadily at one level, with very slight fluctuations. Spindle Top oil is commanding 52 and 53 cents in tanks, while Sour Lake and Batson production is being taken at the wells at 45 cents.

A new feature of the business, and one which has been the cause of uneasiness to the oil brokers, has been the heavy shipment of crude to the Standard through the Security Oil Co.'s Sabine pipe line. The Security Company operates a refinery in South Beaumont, and has a pipe line gathering system which extends to Batson and Sour Lake. A line from the refinery to Sabine, 31 miles in length, gives the company excellent facilities for loading oil at tidewater. Heretofore this line has been used for piping gas oil, which has been loaded on Standard boats for shipment to Atlantic coast stations and to the Standard's agent in England, the Anglo-American Oil Co.

In the past four weeks the Security Company has been piping large quantities of crude through this line to the Standard's tankers at Sabine, and at the same time the company has commenced the construction of a four-inch line from the refinery to Sabine. It is announced that this line will be used exclusively for the transportation of the refinery's products. It must be the intention of the company, therefore, to use its present line, a six-inch, for the piping of crude oil.

To date the shipments by the Security Company from Sabine have been confined to the Standard or its English agent. The fact that the Security has begun the shipment of crude to the Standard strengthens the belief, prevalent here from the start, that the Security Company will eventually

handle all or the greater part of the Standard's business in this region.

All of the various pipe lines have had a share of the Standard's business in the past, and it remains to be seen whether the Security will gradually absorb it to the exclusion of the others. One reason given for the shipment of crude oil by the Security is the fact that it has made contracts for a large amount of light oil at Batson, and that it is getting rid of the heavier product of Spindle Top and Sour Lake in order to make room for the lighter Batson oil. It is well known that the Security has been a heavy buyer of Spindle Top and Sour Lake crude, and it is now buying Sour Lake oil, but the Batson product is more valuable than that of the other fields for refining purposes, and it is doubtless the intention of the management to get as much of the light Batson oil as possible while the various deep wells are yielding a big production. The three Heywood wells, for instance, are running about 4000 barrels a day of 29 gravity oil, all of which is going into the Security line. The Security Company has close to 4,000,000 barrels of tankage in these fields, and a very small part of it is empty. Recently the company has secured a number of large earthen reservoirs in the Beaumont-Sour Lake district, and these are being used as supplementary storage.

In May the Standard bought heavily of Spindle Top oil, loading it at Port Arthur. Several brokers were enabled to unload oil at a profit, owing to the demand for good-sized lots that arose when the Standard's fleet of tankers came into port. Some of them were looking for a repetition of the May purchases, but the shipment of oil through the Security line and Sabine has unsettled their calculations.

Batson production has shown a marked improvement in the last week. From 20,000 to 25,000 barrels daily it went to 35,000 or better, owing to the development of several flowing wells in the deep sand. Three producers—the J. M. Guffey Petroleum Co., the Paraffine Oil Co. and the Heywood Oil Co.—have been getting more than 4000 barrels a day each. The Barclay well, which came in last week, made 12 tanks in 24 hours, or nearly 12,000 barrels.

On Spindle Top things are not looking good. The production has fallen under the 9000-barrels-a-day mark, with little prospect of improvement. This is a decline of 6000 barrels a day in five months. Sour Lake suffered severely from salt water in April and May, and the production fell to about 15,000 barrels daily, but it is reported now that the first two weeks of June have witnessed an improvement.

There is nothing new at this writing from the various prospective fields where oil has been developed in inconsiderable quantities. At Matagorda, the best of the new pools to date, all attempts to finish a second well have been futile. The original syndicate well, however, continues to flow, and is supplying all field and local demands for fuel.

At Jennings the field is showing considerable development, with the prospect of additional wells within the next 10 days.

It is learned from an authentic source that the Southern Pacific Company and its affiliated lines in Texas and Louisiana operate 212 oil-burning locomotives, all of which are supplied with fuel from the Texas fields. The Southern Pacific lines extend from New Orleans to El Paso. The daily consumption of the oil-burning locomotives on the Southern Pacific is 8000 barrels, or at the rate of about 250,000 barrels a month. The company has a reserve supply of nearly 2,000,000 barrels in steel storage in Texas and Louisiana, and is securing the bulk of its oil for current use from Sour Lake.

Drilling on several wells will begin shortly at Nacogdoches, 120 miles north of

Beaumont. The oil field at that place has been developed to a small extent since the eighties. Deep wells will be sunk in the expectation of striking a gusher sand.

HOLLAND S. REAVES.

CITIES OF MISSISSIPPI.

Signs of Industrial Progress at Several Points.

[Special Cor. Manufacturers' Record.]
Jackson, Miss., June 7.

Last week was my Mississippi week, and it was an interesting one. I saw old Mississippi towns pulsating with the life of modern development and new towns active in improvement with the strength and energy of youth.

Here, the State capital, I was present at the organization of the Greater Mississippi Association, which has for its purpose the advertising of the resources of the State and the promotion of public improvement and industrial enterprises. This association was started with a strong official roster, as follows: J. J. White, McComb City, president; H. E. Blakeslee, Jackson, secretary and treasurer. Eight vice-presidents were elected, one from each congressional district, as follows: Walter Weaver, first district; J. M. Edkins, second district; Sam Weems, third district; Isom Evans, fourth district; H. L. McKee, fifth district; W. S. McAlaster, sixth district; R. T. Quinn, seventh district; W. B. Weidner, eighth district.

The purposes were set forth in the following preamble and resolution, which accurately describe existing conditions in Mississippi:

"Whereas, the State of Mississippi is rich in natural resources and material wealth; and

"Whereas, the people of Mississippi are agriculturists and merchants to a large extent from training and inclination; and

Whereas, the manufacture of the great quantities of raw material abounding in this State, such as cotton, hardwoods, clay, etc., would contribute millions of dollars to the wealth and prosperity of the State and enhance the value of city, town and country lands at least 100 per cent.; and

"Whereas, not more than 50 per cent. of the available farming lands of Mississippi are at present under cultivation and stand simply as a tax-bearing burden, while they could and should be made to yield vast sums to the agricultural wealth of the State, with a consequent benefit to the entire people; and

"Whereas, there is a special need of a thrifty and industrious class of truck farmers, dairymen, poultry-raisers, etc., in the State, as well as a number of manufacturers for the manufacture of our cotton, hardwoods, etc.; and

"Whereas, the people of Mississippi have themselves a large amount of money which they do not require in their own business enterprises, and which they would be glad to invest in manufacturing enterprises jointly with successful manufacturers from other parts of the country; and

"Whereas, in order to accomplish the result it is necessary to make our advantages known to the outside world, and to extend an invitation to manufacturers, truck-growers and others who would be glad to avail themselves of the fortune-making opportunities offered by the State of Mississippi, it is necessary to present them to the outside world under proper auspices and through a reliable source; therefore, be it

"Resolved, That the cities here represented, and others that are not represented, but who may afterwards desire to join in the movement, be organized into an association for the purpose of more generally and economically advertising and presenting to the outside world the incomparable resources of the State of Missis-

siippi, and inviting immigrants and investments to the State, and for furnishing to any inquirers information of an accurate and reliable character on all subjects relating to the resources and investment opportunities of the State, and that said organization be known as the 'Greater Mississippi Association'; that a set of officers and board of directors and such other committees as may be required to carry out the objects and purposes of the association be elected and installed, and that the general office of the association be located at Jackson, the capital of said State.

"Be it further resolved, That it is not the purpose of this association to conflict with any organization of similar purpose in the State, either general or local, but that it will at all times render any assistance that it may be able to such organizations and co-operate with them in the general welfare and upbuilding of the State."

Grenada is one the the most enterprising of the smaller cities of the State. It has money, enterprise and resources, and is growing rapidly. Grenada citizens lay down the proposition that there is nothing too good for them to have and nothing too big for them to get, and they are always ready to make good on the challenge, and, of course, such a spirit always accomplishes results.

I attended the other night the organization of the Grenada Business Men's League, and the speeches and resolutions offered bespoke a spirit of enterprise that will in a few years, if kept up, make Grenada a great "up-State metropolis." Augmentary to this accomplishment, Grenada has selected a president, board of directors and secretary of its Business League that represent the progressive spirit of "Greater Mississippi." Mr. Geo. W. Field, the secretary of the League, is well qualified to measure the possibilities of Grenada's industrial development, and he is determined to give the world the best advice on their value.

Among other advantages, Grenada has the Grenada Sentinel, that carries to the world each week an interesting story of Grenada's prosperity, and is edited by J. W. Buchanan, known as "Mississippi's millionaire editor." Mr. Buchanan is essentially an editor, although he lives in the handsomest home in North Mississippi, is a director in various financial institutions, and is a good judge of desirable real estate. Grenada has a future to watch and investment opportunities that are attractive.

Comparing general characteristics and conditions, McComb City could properly be called the Pittsburg or Birmingham of Mississippi. Compared to its business and population, McComb City is probably the largest manufacturing city in the State. The pay-rolls of its various industries amount to something like \$1,750,000 a year, and this is a pretty good factory payroll for a city of 6000 or 7000 people, located in a great agricultural State like Mississippi. McComb City citizens have been smart enough to find out that there is greater profit in selling factory products than raw material for someone else's factory, and are conducting their affairs along that line much to their advantage. Other Mississippi towns, surrounded by vast quantities of raw material, might study McComb City and learn a valuable lesson. There is room and business enough for all.

McComb City has shops of the Illinois Central Railroad, second in size to the main plant in Chicago, with an annual pay-roll of \$1,400,000. Capt. J. J. White, one of the strongest, most successful business men in the Southwest, operates in McComb City one of the largest pine-lumber plants in the country and a \$275,000 cotton mill. Captain White has built the Liberty-White Railroad, an up-to-date standard-gauge road, from McComb City

to Liberty, a distance of 30 miles, and which will before long be extended to one of the trunk lines of the Gould system or some of the other big Southwestern systems. This road has opened up a splendid undeveloped territory, and is a great feeder to McComb City trade. And in passing I would like to say that the mercantile establishments, banks and other commercial institutions of McComb City will easily compare with any other place I know of twice its size.

McComb City supports a splendid daily paper, edited by Mr. R. T. Quinn, who is one of the ablest and most progressive editors in the State, and while he is not exactly as happily situated as my millionaire friend Buchanan of Grenada, he has one of the handsomest homes in the State, and a directory composed principally of bank presidents and cashiers.

Mr. Quinn said to me today that what McComb City wanted more than anything else was 50 first-class truck farmers and a line of small industries, and if this happens to be read by any truck farmers and small manufacturers and they are willing to take my advice they will communicate with R. T. Quinn, secretary of Board of Trade, McComb City.

Poor, unfortunate Yazoo City. No city in the United States compared to population and tax valuation has ever suffered an equal fire loss. Every church, every barn, every hotel, and practically every business institution in the city was burned to the ground.

As I passed through Yazoo City today I saw a picture from the car window that illustrates the courage and happy disposition of the Southerner better than any I have ever witnessed. As far as the eye could reach, away up on the hill to the home of the Hon. John Sharp Williams, where I spent one of the pleasantest days of my life just one week before the fire, and along the railroad side from one end of the city to the other, nothing could be seen but a few scattering chimneys and zigzag walls, and yet threading their way between these depressing evidences of loss and destruction I saw men who two weeks before occupied palatial homes and modern business buildings planning the reconstruction of the brave little city with smiles on their faces and a happy salute for passing friends.

Around the box car that took the place of the splendid Y. & M. V. passenger station in the track of the fire were crowds of girls and boys, who kissed their hands and saluted their friends on the train and around the station site as if Yazoo City had never had a trouble.

Such courage and such spirit could build a city in a wilderness, and it will only be a short time till there will be a greater Yazoo City than before.

LEE J. LANGLEY.

MARYLAND AT ST. LOUIS.

The State Building Turned Over to the Exposition Authorities.

[Special Cor. Manufacturers' Record.]
St. Louis, Mo., June 13.

A foretaste of Maryland Day, September 12, at the exposition was given last Thursday, when the Maryland State Building on the grounds was dedicated and formally turned over to the exposition authorities. The building was filled with a crowd of about 500 persons, including a large party who had come from Maryland, and the greatest enthusiasm marked the reception given to the speeches by Col. L. Victor Baughman, chairman of the Maryland commission, ex-Governor David R. Francis, president of the exposition; Governor A. M. Dockery of Missouri and Mr. Murray Carlton, president of the Maryland Society of St. Louis. In his address Colonel Baughman said:

"Some two years ago a body of distin-

guished citizens of St. Louis visited our State Capitol and before the legislature of Maryland made known the plans then being formed to celebrate one of the most important events in the annals of American history. Impressed with the importance of so grand an enterprise, a liberal appropriation was made and placed in the hands of the commissioners appointed by John Walter Smith, governor of our Commonwealth.

"Little did we dream, however, at that time of the magnitude and wonder of this exposition. The men intrusted with the creation of this celebration, imbued with true American spirit, had determined to eclipse all other expositions ever held, and consequently every State in the Union joined hands with the Louisiana commissioners in making this exposition the wonder and admiration of the civilized world.

"The Maryland commissioners were obliged to again appear before the legislature of their State for an additional appropriation. Maryland, ever ready to take her part in all great events appertaining to the welfare of her people and of the Union, was prepared to grant the request, but at that time there swept over our Monumental City one of the most destructive conflagrations ever known in the civilized world. Where once stood superb banking and trust buildings, old and substantial stores and massive warehouses, all were in two days a mass of smoldering ruins. Merchants and business men stood amid their ruins and gazed in awe at the frightful scene. Tears and lamentations ill become the men who boast of their long line of Colonial and Revolutionary sires, and while the world and sister cities were generously offering us their aid we determined as Marylanders to stand together and bear alone the terrible blow like the heroes of old. Our legislature and the people of our State determined to show to the world that we would build up our ruined places and again seek and secure our share of trade by fair and honest competition. We turned our backs upon the ruins of buildings, forgot that over 180 acres of magnificent structures had fallen and that in two days we had suffered a loss of millions and millions and millions. So amid the splendid palaces erected by the States of the Union upon these beautiful grounds we today turn Maryland's home over to the exposition."

President Francis referred to the presence among the directors of the exposition of several natives of Maryland who now live in St. Louis, and expressed gratification at the appropriation made by the Maryland legislature for representation at the fair in spite of the conditions following the great Baltimore fire. That fact was also referred to by Mr. Carlton, who said:

"The participation of Maryland in this, the greatest of national and international expositions, is a tribute to the patriotism, courage and enterprise of the citizens of a Commonwealth whose annals are replete with events that have contributed largely to our national greatness. All the more is this true when we consider the great calamity—the disastrous fire—which almost destroyed the metropolis of the State, yet out of which issued the success and achievement which we today are so delighted to acknowledge."

The Automatic Telephone.

Among the exceptionally interesting features of the universally interesting electricity exhibits of the World's Fair are the displays of the various telephone companies in the Palace of Electricity and of the crowning interest, not only because of its novelty to the general public, but because of the part it seems destined to play in the field of daily public convenience and comfort, is the automatic telephone installation made by the Automatic Electric Co.

of Chicago. Here is a large working exhibit of automatic telephone apparatus, with two complete switchboards, and the plant is in constant operation for the benefit and instruction of the public. How a telephone system is conducted with the entire elimination of "central" is here fully demonstrated, with an elucidation of advantages even more numerous than naturally suggest themselves to every one familiar with the annoyances inseparable from use of the present telephone systems. The automatic company utilizes the stronger patents on automatic telephone equipment, and after nine years of service test they are coming strongly into public favor. Independent telephone companies all over the United States are adopting the automatic system, and even foreign countries are now taking hold. Chicago has an exchange with 10,000 present capacity, and 100,000 ultimate capacity, and even Los Angeles, Cal., has an equal ultimate capacity. Some 25 other American cities have adopted the system, and the factory of the company at Morgan and Van Buren streets, Chicago, occupying 100,000 square feet and employing 800 hands, is crowded to its utmost capacity to fill the orders that are being received. Since 1902 the growth of the business has been almost overwhelming. Up to that year the company occupied other and much smaller quarters, but during the summer of 1902 so many orders were received that the company was forced to take the present building, where every part of all its six floors and the basement are occupied with the machinery, all of the latest and best types, which is used in the manufacture of the instruments and equipment.

In the use of the automatic telephone the subscriber himself, by simply manipulating a dial on the instrument, makes the call of the person he wishes to ring up. The connection is instantaneous, is absolutely secret, and there is no chance for another subscriber to cut in or in any way interfere with the line in use. Errors are declared to be impossible, the absolute working accuracy of the various parts of the equipment having been established. A tired, sleepy, indifferent, busy or "sassy" central can never intervene to irritate and annoy the subscriber, and the subscriber will never be called on to spend a bad quarter of an hour trying to ring off and call up another number. Disconnections occur automatically and instantly on hanging up the receiver. If the party called up is using his phone a bell gives the busy signal, but you can get him just as soon as he gets through, and he is never reported busy if he is not busy. Foreigners wouldn't be compelled to get an interpreter in attempting to call up anyone who spoke their language. Turn the dial to the number required and the Frenchman or Russian or whatever he were would be able to talk with his kind in any land where the automatic phone might be found.

Besides convenience to the subscriber, the automatic is profitable to the operating company. No operators being required, and fewer clerks, an actual test, by comparing the salary list of a manual and an automatic system of practically the same number of subscribers—5125 manual and 5507 automatic—shows a yearly saving of more than \$25,000 in favor of the automatic system, and the entire cost of maintaining the systems shows substantially the same advantage for the automatic. Furthermore, there being no operators, the automatic exchange can be located in less expensive quarters. No lockers, lavatories or reading and retiring rooms are needed, and less is required for fuel and lights. In increasing the number of subscribers to an exchange the additional cost in the automatic system is merely that of new

telephones and switches, and not, as with the manual system, an increase in the cost per subscriber on account of the disproportionately increasing complexity of the exchange as new subscribers are acquired. With the automatic system the cost of operation is fixed and stationary, and an exchange may be increased to any number of subscribers without impairing the service and without increasing to the company the cost per subscriber. Another feature which must add to the popularity of the service, and consequently to the number of subscribers in any given exchange, is the fact that in times of special public excitement—elections, catastrophes, etc.—and in the rush hours of the day, the automatic will work as promptly and as well as in the quietest hours of the night. Nothing can frustrate or choke up the automatic; it never sleeps, and it never gets busy. It is the same yesterday, today and forever, and would certainly appear to be one further step toward the dawn of the promised day of universal peace.

A Big Boiler Exhibit.

In the steam, gas and fuels building, which is located directly west of the Palace of Machinery, are displays which, while not appealing to the popular fancy like the more spectacular exhibits elsewhere throughout the grounds, are nevertheless of the greatest interest to the practical investigator. Among the notable exhibits found here is that of the Aultman & Taylor Machinery Co., whose plant is by far the largest boiler exhibit ever made, and constitutes about 60 per cent. of the entire exhibitors' boiler plant at the exposition. The exhibit consists of eight 508-horse-power boilers built to carry 250 pounds steam pressure, each boiler containing 5080 square feet of heating surface, and is equipped with its own chain grate stoker; four boilers, 508 horse-power each, of 175 pounds steam pressure, each equipped with its own chain grate stoker, and eight 400-horse-power boilers, built to carry 175 pounds steam pressure, each boiler containing 4000 square feet of heating surface, and equipped with Aultman & Taylor chain grate stoker.

All of these boilers are of the "Cahall" horizontal water-tube type. Each installation is equipped with an independent induced-draft apparatus, and the coal is fed to the stoker hoppers by storage tanks and the conveyor system.

They also have three 250-horse-power "Cahall" vertical boilers, each boiler containing 2536 square feet of heating surface, and each boiler is equipped with Aultman & Taylor Machinery Co. chain grate stoker. Each of these three boilers has an independent stack, and is operated with natural draft.

This makes a total of 8014 horse-power of boilers and stokers, all of which are in operation and are developing in the neighborhood of 12,000 boiler horse-power and supplying steam for over 25,000 engine horse-power. The high-pressure boilers are used for operating the steam turbines that are located in the Palace of Machinery.

In addition to the working exhibit, the Aultman & Taylor Machinery Co. has a very large non-working exhibit situated in block 53, on the northwest corner of the Palace of Machinery. This exhibit consists of one 125-horse-power horizontal water-tube boiler, equipped with the Aultman & Taylor Machinery Co.'s superheater and chain grate stoker, and the boiler is bricked up on one side, leaving the other side exposed, so that the entire system can be examined. It also has one Cross drum type horizontal water-tube boiler of 100 horse-power capacity, bricked up entirely on one side, and also one 100-horse-power "Cahall" vertical water-tube boiler bricked up in similar manner.

This exhibit, for which the Cahall Sales

Department, Pittsburg, is responsible, is an extremely attractive one, due to the fact that it permits of a thorough study of the different types, and the travel of the gases can be easily followed. In addition to these three full-sized boilers, they have all of the parts in unassembled condition, as well as a very pleasant office fitted up on this space, and they have issued a standing invitation to the trade papers' representatives and the trade generally to avail themselves of the facilities of their office and exhibit space while visiting the fair.

FOR A \$1,000,000 HOME.

Plans for Rebuilding the Enlarged Baltimore American.

The Baltimore American, true to its motto, "We Build," will erect on its old site, at the southwest corner of Baltimore and South streets, a magnificent 16-story fireproof office building and newspaper plant, the cost of which, including the site, building and equipment, will be about \$1,000,000. The lot faces 70 feet on Baltimore street and runs back to a depth of 127 feet on South.

The plans for the building, which were designed by Otto G. Simonson, present a substantial, dignified and symmetrical appearance. The first three stories will be constructed of Indiana limestone, and will have ornamental cast-iron and plate-glass store fronts; the remaining stories of the building will be of light colored brick with architectural terra-cotta trimmings. The frame of the building will be of steel covered with fireproofing material, and it is the intention of the owners to make the building fireproof throughout, with metal window frames and sashes, glazed wire-glass and the adoption of every means to protect it from flames both inside and out.

The interior decorations of the offices will be of Italian marble, while the vestibules, lobbies, corridors and counting-rooms will have a dark-veined English-Italian marble wainscot, which will also extend around all of the halls.

The building will contain 350 offices, arranged in suites, each one of which will be equipped with a fireproof vault for the safekeeping of valuable books, papers, etc., hot and cold water service, pneumatic tube transportation system, electric call bells and ice water.

Three electric passenger elevators running in a fireproof shaft will be installed, and the power for these and the lighting service will be supplied by a complete electric-generating plant consisting of three high-speed automatic cut-off non-conducting horizontal steam engines, each one of which will operate a direct-coupled electric generator. These generators will also supply the power for operating the printing presses.

The main newspaper plant, which will be located in the cellar, will consist of two double sextuple Hoe presses, each one of which is capable of printing 100,000 copies of the paper an hour. The composing rooms, which will be on one of the top floors, will be equipped with 25 Mergenthaler linotype machines.

The American will also install the latest system of wireless telegraphy, and for this purpose a large mast 150 feet high will be placed on top of the building to receive messages from Washington and other nearby points.

The work on the construction of the building has already commenced, and the George A. Fuller Company, which has the contract for erection, is now excavating for the foundations for the building, and the building operations will be rushed as rapidly as possible towards completion, as the management of the paper is extremely anxious to once more get into its own home and out of the cramped and scattered quarters into which it was forced by the great fire. Unless circumstances over

which it has no control arise and upset its calculations, it expects to print its first paper in the new building on January 1, 1905, although the entire building will not be ready for occupancy until May of that year.

At the western end of the same block on Baltimore street on which the American is situated is the large 16-story office building of the Continental Trust Co., and these buildings on the ends of the same block will present a very imposing and symmetrical appearance, and will add considerably towards beautifying the business section of the city.

CAPE MAY'S OPENING.

Press Representatives of Three Cities First Guests of 1904.

A certain indication that the 1904 season at Cape May, N. J., has begun in earnest was the excursion to that resort tendered during the week by the Pennsylvania Railroad Co. to the press of Washington, Baltimore and Philadelphia. Several hundred newspaper men, with their wives, sisters, sons and daughters, gathered to enjoy the hospitality of the company. After a rapid ride to Cape May in modern coaches over the smoothest of roadbeds, the party lunched at that famous old hostelry, the Stockton Hotel, last Saturday. The following three days passed rapidly in bathing, boating, sailing, fishing, golfing, driving, dancing and other pleasures which are so much enhanced by being enjoyed at the ocean side. Cape May itself is an ideal place for a restful holiday, and that no doubt is entertained of its permanent popularity as one of the leading American watering resorts is evidenced by the extensive improvements now in progress. The best engineering skill is engaged in reclaiming marsh lands, providing a harbor of refuge for vessels, constructing a seawall, extending the ocean driveway and otherwise making betterments at a cost of several million dollars, and another Pennsylvania depot to accommodate the increasing volume of travel will be built. Through the admirable arrangements perfected for the guests by George W. Boyd, general passenger agent; J. R. Wood, passenger traffic manager, and F. N. Barksdale, chief of the publicity department of the Pennsylvania Railroad, there was nothing left undone to contribute to the enjoyment of the occasion. En route the evidences of the company's strenuous policy for constant betterments was patent to every eye. With its thousands of miles of track, its rolling stock and its other equipment the Pennsylvania is evidently determined to retain that position which has made its name synonymous with perfection in modern railroad management. The Baltimore contingent of press representatives was much indebted for the courtesies shown by Mr. Hugh Hasson, Jr., the Pennsylvania's district passenger agent in their city. His efforts to make the occasion a notable one in their holiday events did not at any time relax.

Secrets of Canning. Publisher, John Murphy Co., Baltimore. Price \$5.

A new edition of the Secrets of Canning has just been issued by the publisher, John Murphy Co. This book contains much information that is of great benefit to those contemplating the erection of a cannery, or who are already engaged in the business. Among other things, it gives estimates of the amount of machinery, and its cost for equipping various size plants and their capacities, the different fruits, vegetables and fish best adapted for canning, and how to process them. The markets for canned goods, the laws relating to canned goods and a list of packers throughout the United States.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

NEW LINES PROJECTED.

One From Atlanta to Charleston Proposed—Other Charters in the South.

Several new railroad projects are reported from various points in the South. One of these is for a road from Charleston, S. C., to Atlanta, Ga., to connect with the Western & Atlantic Railroad, which is owned by the State of Georgia and which is now leased to the Nashville, Chattanooga & St. Louis Railway. M. T. Langan of Brunswick, Ga., is said to be advocating the building of this new line from Atlanta to the sea, and the projectors appear also to have in view the possibility of extending further westward.

The Monroe Central Railroad has been chartered in West Virginia, to have its office at Union, in that State. It is to build a line from a point near Peterstown to Red Sulphur Springs, and thence to Ronceverte, about 35 miles. Branches are also to be built. The incorporators are Joseph D. Logan, A. S. Johnson, W. H. Copeland, B. C. Young, S. F. Humphreys, Allen Caperton, J. W. Lynch and M. L. Kester.

Ferguson & Palmer, lumber dealers of Paducah, Ky., according to a dispatch from Dyersburg, Tenn., are planning to build a railroad from the latter place up Forked Deer river for about 10 miles to get out lumber. The contracts are reported let, and there is talk of extending the new road to Trenton, Tenn.

The charter of the Westpoint Railroad Co. is reported in Arkansas to build a line from Westpoint to Kensett and Searcy, nine miles. This line will be in White county. The directors are C. W. Douthat, W. H. Foster, A. L. Williams, A. W. Yarnell and N. Hardy.

Col. Morgan Jones, president of the Wichita Valley Railway, which has recently built an extension of about 23 miles from Wichita Falls, Texas, to the Red river, is reported as saying that the line will be further extended northward, but that he could not say to what point, nor would he say when construction would begin. It is reported elsewhere that the line will be built for a considerable distance into Oklahoma, work starting in September.

The Winchester & Washington Electric Railway Co. is reported organized at Winchester, Va., to build a line between that place and Washington, D. C., about 60 miles. A charter is to be applied for, and it is said that construction will begin as soon as it is obtained. The officers are: President, N. H. Hansbrough, who is president of the Shenandoah Valley National Bank; manager, S. L. Hoover, who is superintendent of the United Telephone Co.; secretary, Shirley Carter.

Advices from Dallas, Texas, say that application will be made for a charter for the Dallas & Eastern Texas Traction Co. to build an interurban electric railway from Dallas to Mesquite, Forney, Terrell, Elmo and Wills Point, about 50 miles. Those reported interested in the project are T. L. Marsalis of Dallas and New York city, W. B. Greenlaw of Dallas, R. S. Kimbrough of Mesquite and Colonel Marshall of Wills Point.

QUEEN & CRESCENT WORK.

Heavy Bridges Being Put In on the Cincinnati, New Orleans & Texas Pacific.

Mr. G. B. Nicholson, chief engineer of the Cincinnati, New Orleans & Texas Pacific Railway (Queen & Crescent Route), referring to the recent report that the company would make improvements costing about \$500,000 between Cincinnati

and Chattanooga, writes the Manufacturers' Record as follows:

"The company is spending considerable money. The replacement of the viaduct approach to Cumberland river bridge, 740 feet long, and New river, 200-foot span, and viaduct approaches of a total length of 1320 feet, have been under contract for some time, and erection is just being started. A contract has just been let to the American Bridge Co. for rebuilding Fishing creek viaduct, 570 feet long, and that over south fork of Green river, 1200 feet long. The renewal of these bridges is to obtain structures fitted to carry the heaviest type of engines. In addition to this, about 800 feet of the north and south ends of the viaduct at south fork of Green river will be filled with an embankment by the Callahan Construction Co. of Knoxville, Tenn."

ON TO NEW ORLEANS.

Louisiana Railway & Navigation Making Good Progress With Its Work.

The Louisiana Railway & Navigation Co., formerly the Shreveport & Red River Valley Railway Co., is reported to be making active progress on its extension to New Orleans. J. A. Saxton, general agent of the company, is quoted as saying that the tracks in that city have nearly reached the site of the terminals by the new basin opposite the Illinois Central station. Between Broad and Carrollton avenues along the new basin grading is almost finished, and it is expected that within a few days track will be completed from the Protection levee to the site of the station at Liberty street.

Between Baton Rouge and Bayou Sara the bridge over Thompson's creek is finished and the construction trains are running over it. Tracklaying will be pushed on from there to the crossing of the Mississippi river at Angoula, where it is proposed to erect a large bridge.

Completed to Brownsville.

The St. Louis, Brownsville & Mexico Railway now has its tracklaying completed to Brownsville, Texas, the southern terminus of the line. This is the first railroad from the north to enter the city, and it is proposed, according to reports from there, to open the road on July 1, when the contractors are to turn it over to the railroad company. This is the railroad projected by Col. Uriah Lott, and in which Mr. B. F. Yonkum of the Frisco system and others are interested. It is about 140 miles long from Sinton, Texas, to Brownsville, and the headquarters of the company are to be at Kingsville, a new town in Nueces county.

President Lott, with Col. L. Jeff. Miller, the new vice-president and general manager, and F. G. Jonah, chief engineer, have made the run to Brownsville over the new road. A site of about 17 acres was selected for the terminals between Fifth and Upper Levee streets and Fronton street and Avenue D. The passenger depot will be at the corner of St. Charles and 12th streets. Arrangements are reported made for the trains of the new line to enter Corpus Christi over the track of the Mexican National Railroad.

Coast Line's New Equipment.

Mr. J. R. Kenly, fourth vice-president and general manager of the Atlantic Coast Line, referring to the reported equipment order of the company, writes the Manufacturers' Record as follows:

"We have orders with the Baldwin Locomotive Works for two yard engines, one consolidation engine and 15 10-wheel freight engines.

"We have just received from the Pullman Company six modern 60-foot coaches with wide vestibules, steel platforms, West-

inghouse friction draft gear, high-speed brakes and steam heat. These coaches are modern in every respect, and are fine examples of the car builder's art.

"We expect to build at our shops during the coming year about 1000 freight cars of various classes.

"In addition to the above, we have received from the American Car & Foundry Co., Huntington, W. Va., 200 of 80,000-pound capacity coal cars with steel underframes."

Rock Island May Build to Galveston.

The Rock Island system, according to a report from Houston, Texas, will build its projected outlet to the Gulf. The Chicago, Rock Island & Gulf Railway Co. was incorporated in Texas about two years ago for the purpose of building this line, and the extension from Fort Worth to Dallas was then constructed, it being the intention to continue from Dallas down through the State about 300 miles to Galveston. The route was surveyed, and it is said that rights of way were obtained for most of the distance. Then came the negotiations for control of the Houston & Texas Central Railroad, and the plan for an independent line was dropped. Now comes the report that the Houston & Texas Central deal is at an end, and that the Rock Island will build its own line.

Cache Valley.

Mr. H. A. Culver, general manager of the Cache Valley Railroad Co., writes from Sedgwick, Ark., to the Manufacturers' Record concerning the proposed extension. He says:

"We have amended our charter so that we will have a line crossing from Paragould to Walnut Ridge in connection with our main line running north, and it will cross the main line at Light. There will be no advertised bids for the construction work, as it will be let in small sections by the settlers tributary to the line.

"The length of the Walnut Ridge-Paragould extension will be 27 miles, and it will connect with the Cotton Belt and Iron Mountain at Paragould and the Iron Mountain and Frisco at Walnut Ridge."

Beaumont to Sour Lake.

The Beaumont, Sour Lake & Western Railroad Co. is the new name of the line that is being built from Beaumont to Sour Lake, Texas. It was formerly the Beaumont, Sour Lake & Port Arthur Traction Co., but instead of an electric railway a steam road is being constructed. The charter has been amended to permit an extension of the line from Sour Lake via Batson to Houston. The bridge across Pine Island bayou is reported complete, and tracklaying is nearing Sour Lake. G. W. Meeker is president; William Wiess, first vice-president; Emory J. Smith of Columbus, Ohio, second vice-president; Hugh A. Smith, traffic manager and general passenger agent, and George W. White, chief engineer.

The "Orient" in Mexico.

G. H. Winkler, an engineer on the survey of the Kansas City, Mexico & Orient Railway, according to a dispatch from Chihuahua, says that, with the exception of 60 kilometers, the entire line is now located. The heaviest grade will be 2½ per cent. compensated. The route is through the high lands between the Urique river and the Septentio arroyo, about 100 kilometers west of Bacoyna. At Matote mountain the line begins to descend towards the western coast of Mexico by a series of loops.

Reported Colony and Railroad Plan.

It is reported from Houston, Texas, that Col. L. J. Polk is interested in a plan to colonize a large section of land in the

Panhandle of Texas and to build a railroad through that country for the purpose of carrying out the scheme. Among those whose names are mentioned in connection with the reported project are C. L. Talmadge of Chicago, Ill.; Jonathan Lane of Houston, Texas, and E. M. House of Austin, Texas. A line from San Antonio to Brownsville is also said to be projected by Colonel Polk and his associates. He declines to talk about any plans which he may entertain.

St. Louis, Little Rock & Gulf.

Committees of the Board of Trade of Little Rock, Ark., and the directors of the proposed St. Louis, Little Rock & Gulf Railroad are reported to have agreed upon terms regarding a bonus of \$100,000 for the company, provided the latter will locate the shops and offices in the city of Little Rock. The contract for the road is said to have been awarded to the Arizona Improvement & Investment Co., and John Shain of Bowling Green, Ky., has the contract to clear the right of way from Little Rock to Sheridan, 40 miles. H. S. Shaner of Little Rock is president of the railroad.

Aberdeen & Rockfish Extension.

President John Blue of the Aberdeen & Rockfish Railroad writes from Aberdeen, N. C., to the Manufacturers' Record concerning the proposed extension of the line. He says: "We will build seven miles to Hope Mills, N. C., which will connect there with the Atlantic Coast Line Railroad. This extension is now under construction; we have two miles of track laid and three miles graded. Expect to complete the extension by the middle of July or the first of August."

Pine Bluff to the Choctaw.

Mr. E. C. Howell writes from Pine Bluff, Ark., to the Manufacturers' Record confirming the report from there that a movement is under way to build a railroad from Pine Bluff to connect with the Choctaw, Oklahoma & Gulf Railroad of the Rock Island system. He also writes that a committee has been appointed to solicit subscriptions for the enterprise. An organization is to be perfected and engineers are to be secured to make a preliminary survey.

St. Augustine & South Beach.

Conrad Decher, who, as the holder of most of the bonds of the St. Augustine & South Beach Bridge & Railway Co. at St. Augustine, Fla., bought in the line at the sale, is reported to be improving the property. The Merrill-Stevens Company of Jacksonville is said to have the contract for rebuilding the bridge, and a steel draw has been ordered from Atlanta. New rails and ties have been purchased, and at South Beach the pavilion is being enlarged.

The Gulf & Ship Island Railroad reports through Fisk & Robinson for May gross earnings \$148,083, increase \$6761. From July 1 to May 31 gross earnings \$1,681,825, increase \$126,365.

Cottonseed Crushers.

The Interstate Cottonseed Crushers' Association at its annual meeting at St. Louis elected Messrs. C. Fitzsimmons of Columbia, S. C., president; J. C. Hamilton of Baton Rouge, La., vice-president, and Robert Gibson of Dallas, Texas, secretary and treasurer.

Wants Hull Bran.

T. T. Wolfenden of Union Springs, Ala., writes the Manufacturers' Record that he wants to correspond with manufacturers of hull bran—that is, finely ground cottonseed hulls.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

ANTS AND BOLL-WEEVILS.

A Study of the Texan Report About the Destroyers.

A correspondent of the Manufacturers' Record at San Antonio, Texas, writes:

"Upon receipt of your telegram I drove up to Laurel Heights, where Mr. Cassiano has his city residence, to interview him on the reported destruction of the boll-weevil by ants on his ranch near Elmendorf, about 17 miles southeast of this place. Mr. Cassiano was at his ranch, and, as is usual with the Mexican race in their class, the female members of the family know nothing at all about the outdoor affairs of the males, deeming it, I suppose out of their sphere and incompatible with their dignity to meddle in the sterner affairs of life. I could therefore get no information from them further than that Mr. Cassiano had a cotton ranch and there were boll-weevils in his cotton, all of which I knew before. One of the children, however, a little more Americanized than her elders, showed me a small cotton plant in their flower garden which seemed to have been partly eaten by weevils. At the root of this plant was a small ant bed, such as we commonly see about here, and one small ant, not over one-quarter of an inch in length, running about on the plant. This, the child told me, was the ant they thought killed the weevil, but I jumped at the conclusion that the little fellow was too small to engage in a contest with such a large enemy as the weevile unless it had the courage and dash of the little Japs. I was strengthened in this conclusion by seeing a ladybug on the plant, which may be the natural enemy of the weevil, and possibly killed it and left it as a midday lunch for the ant. I am rather inclined to think this ladybug is the enemy that destroys the weevil, just as it does the scale worm on the orange trees in California, and the little ants seize upon the dead weevile and bear it off to its bed to pack away for winter use. But the difficulty in supplying ladybugs in sufficient quantities would be greater than in obtaining ants, which are much more numerous and multiply much more rapidly; so the cotton planters must seek other and possibly artificial means of eradicating the boll-weevil pest.

"I interviewed the secretary of the Business Men's Club, as well as many leading business men who have kept in touch with the government experiment stations, and found there was but little faith in the truth of the reports that ant destroyers of the boll weevil had been found in any quantities. The impression was that Mr. Cassiano had been too strongly reported, and that he had not actually seen the work of destruction going on, but only the ants bearing dead weevils to their beds or dens.

"Most of the parties interviewed thought paris green the only effectual remedy, and that it could be applied with little or no danger from the poison except possibly to the eyesight of the party making the application. From all I can gather it is with the planters in a great measure to eradicate this evil. Either from negligence, laziness or to save the cost of seed for planting, some farmers do not plow up their cotton stubble, but merely break down the stalk and leave the stubble to put up shoots from the roots, and in such cases the weevil is always most destructive. The deduction is therefore easy and clear that if the planter would plow up his cotton plants as soon as the crop could be gathered, rake the stalks, roots and all into heaps or windrows and burn them effectually, and then rotate one year's cotton field with corn, oats or spring wheat,

the egg which is deposited on the root of the stalk would be destroyed and the larvae never hatch out to destroy the growing crop. I think if such a plan could be successfully followed for a year or two the boll-weevil would entirely disappear and our planters saved the expense, trouble and possible injury to the plant and to individuals by the use of paris green or any other composition."

Georgia Mill Men.

The Georgia Industrial Association at its meeting last week agreed to maintain full prices for the limited quantity of cotton goods its members will be able to produce, on the ground that the visible and invisible stocks of cotton and cotton goods of the world are smaller than ever before at this time of the year relatively and as compared with the world's requirements, and that because of the scarcity of cotton the mills will not be able to run on full time. Arrangements were made for the appointment of a committee of five to urge the establishment of a department of immigration for Georgia, for an increase in the membership from among manufacturers of all kinds in the State, for the appointment of a legislative committee to defend the interests of members of the association, and for enlargement of the membership of the executive committee. The association endorsed the Alabama statute against boycotting and blacklisting. The officers elected were Messrs. F. D. Gordon, Columbus, president; H. B. Meikleham, Lindale, vice-president; Chas. D. Tuller, Atlanta, secretary and treasurer.

The Cotton Movement.

In his report for June 10 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 284 days of the present season was 9,738,730 bales, a decrease under the same period last year of 684,777 bales. The exports were 5,735,101 bales, a decrease of 757,529 bales; takings by Northern spinners 2,024,260 bales, a decrease of 9596; by Southern spinners 1,779,122 bales, an increase of 9029 bales.

Textile Notes.

Statesville (N. C.) Cotton Mills has declared its usual semiannual dividend of 4 per cent.

Avondale Cotton Mills of Birmingham, Ala., has purchased the Central Mills at Sylacauga, Ala., a plant of 10,080 spindles.

W. B. Candler of Villa Rica, Ga., contemplates establishing a knitting mill, and wants estimates on the cost of machinery and other information regarding the knitting industry.

M. L. Brown of Bremen, Ga., contemplates establishing a knitting mill, and wants estimates on the cost of machinery and other information regarding the knitting industry.

Nashville (Tenn.) Hosiery Mills has purchased the Limestone Hosiery Co.'s mill at Athens, Ala., and will remove the equipment to Nashville, consolidating with its plant in that city.

The public sale of the Barnesville (Ga.) Manufacturing Co. property was held June 7. J. W. Cabaniss of Atlanta, representing the bondholders, purchased the plant at \$50,000. There are 9764 spindles in the mill. Probably the company will be reorganized.

The Raccoon Manufacturing Co.'s property at Raccoon Mills, Ga., was sold on June 7 to John D. Cleghorn of Summerville, Ga., at \$50,625. The mill contains 3400 spindles and 104 looms, and it is probably the buyer's intention to reorganize the company and continue the plant.

FOREIGN TRADE

To Make Wooden Lasts.

Simoulin & Co., No. 92 Faubourg du Temple, Paris, write to the Manufacturers' Record as follows:

"We are in search of an American machine for turning out wooden lasts for foot covering. There is now in France an American machine which produces one last at a time, either the left or the right foot, but what we desire is a machine that can make the pair, left and right foot, at the same time. The consumption of these lasts has during some years past assumed considerable proportions, and there does not now exist in France a house that is capable of giving satisfaction to its customers. In consequence we are anxious to install a factory for the manufacture of these forms with the new American machines, making a pair at a time. In case there is such a machine an engineer will take charge of the matter. The order would be for ten lathes, all or some to be delivered without delay. In mentioning the machines it would be necessary to indicate the power required to operate them and the production per day by ten hands. The seat of the business would always be in Paris, the center of the trade which we are now supplying with our goods and which we know personally. The capital needed for the venture would be 400,000 francs, though the figures might possibly amount to 1,000,000 francs and the net profits to 200,000 or 250,000 francs. It might also be well to add an agency for various articles in the footwear line, for goods of that kind from America are very much in favor in France."

Wants American Tools.

Le Mois Scientifique et Industriel of No. 8 Rue Nouvelle, Paris, writes to the Manufacturers' Record that it has an inquiry from Russia for American catalogues of scythes, sickles, files, shovels, mattocks, hammers, axes and hatchets. It says that its client will begin by buying these goods in order to introduce them into Southern Russia, but later will manufacture them on the spot with an improved mechanical outfit. This Russian intends ultimately to send an engineer to the United States to complete the purchase of toolmaking machinery, and is therefore desirous of finding an agent speaking French who might study up the matter in advance, begin negotiations, learn prices, get information of every kind and accompany the engineer on his trip to aid him. This agent would be paid his traveling expenses, together with commission, upon all purchases made.

Alcohol for Fuel.

Laine & De Pool of Havana, Cuba, write to the Manufacturers' Record that they are especially interested in handling alcohol burning motors, auto-pumps, stoves and lamps. They add: "In places like this, where every season brings different demands, one must be prepared to meet varying demands—in sugar time with bags, in winter with crates, seeds, etc., in tobacco time with fertilizer, and the year round with notions."

Wants a Cocoa Dryer.

Cyril C. Henriques of Kingston, Jamaica, writes to the Manufacturers' Record that he has had an inquiry for a cocoa dryer or evaporator, and that he desires to get into communication with American manufacturers of such an outfit.

Victor Jacquet of Lodolinsart, Belgium, writes to the Manufacturers' Record that he is interested in introducing into Belgium American garden rakes, hay forks, carpentry and smithy implements and wooden handles for tools of all kinds.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Co-operation in Lumbering.

In order to promote the more economical and effective use of forest resources, the national bureau of forestry offers under certain conditions practical assistance to the users of wood in the study of problems as follows:

To determine the length of life or service of a given timber in its natural state, with respect to mechanical abrasion and ability to injury and decay.

To determine the best method of treating a given timber to extend its life, either by seasoning, chemical treatment, painting, charring or other means.

To determine the strength and other mechanical properties of given timbers, and the influence on these properties of such factors as the rate of growth, the manner of sawing, the length and manner of seasoning, technological operations such as kiln-drying and treatment to preserve the wood from fire or from decay. To determine the proper species and sizes of timber for special products, such as box boards, crossarms for poles, shafts and rims, etc.

To determine the rate of seasoning of timber cut at different times of the year and the influence upon seasoning of the form in which the timber is piled, and to determine the length of kiln-drying and the degree of heat best suited to secure rapid drying without injury.

To determine to what extent low-grade or abundant timbers, when properly treated, can be substituted for high-grade or scarce timbers.

Operation of turpentine orchards, production of charcoal and other products of the destructive distillation of wood, manufacture of tannic acid, wood pulp and other similar commodities.

For 1,000,000 Crosssties.

A large lumber firm of Huntingdon, Tenn., has secured a tract of land in Mississippi with a supply of oak timber upon it sufficient, it is said, to keep 100 men busy cutting for the next 10 years. This purchase is to make possible the filling of a contract for more than 1,000,000 crosssties for several of the railroads in Mississippi.

Mr. Ray Wiess Appointed.

It is announced that Mr. Ray Wiess has been appointed general sales agent of the Kirby Lumber Co. of Houston, Texas, succeeding V. A. Longaker, who resigned. Mr. Wiess formerly represented the Kirby Lumber Co. at Chicago.

Lumber Notes.

Plans have been perfected for a railroad to run east 10 miles from Dyersburg, Tenn., to haul timber from the properties of a Paducah (Ky.) firm on Forked Deer river.

Kaden & Nestler of Dresden write to the Manufacturers' Record that they are looking for American manufacturers of finished hickory spokes, German pattern, as well as for sawn hickory spoke billets.

The Texas State Lumbermen's Association is endeavoring to bring about a change in a ruling of the railway commission which, it is claimed, cuts off the lumber manufacturer in the long-leaf pine region from the consumer in North Texas.

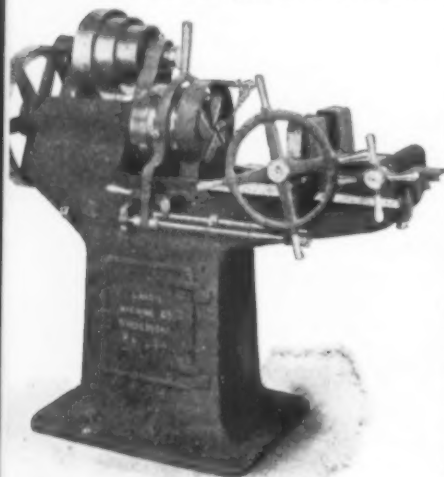
It is reported that Chicago capitalists will establish in various parts of South Georgia plants to extract by the steam process spirits of turpentine and rosin from pine stumps, and will establish at Valdosta storage tanks for the products, which will be shipped by rail to Chicago.

MECHANICAL

The Landis Bolt Cutter.

Users of bolt cutters will find the accompanying illustrations of the Landis Bolt Cutter of interest. The trouble and inaccuracy caused by many ordinary dies was the cause of the development of this die. In it is claimed to be eliminated the many tedious operations necessary in renewing dies, increasing the life of the die and securing results not to be obtained from a hobbled die.

The die is composed of four chasers made from flat pieces of steel. The teeth

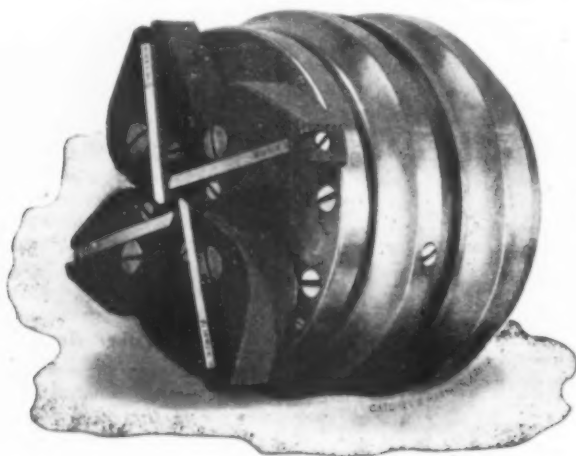


THE LANDIS BOLT CUTTER.

are milled the entire length on the flat sides of the chasers. The milling is done with special machinery, which insures the greatest accuracy. The throat is formed by beveling the front edge of the chasers. This gives uniform shape, so that the same results are obtained after each grinding.

The tempering never needs be repeated, thus avoiding the danger of cracking, etc. The cutting is done on the ends of the chasers, and the grinding is also done on the ends. This gives a long life, as nearly the entire length of the chaser can be used.

Owing to the shape and manner of hold-



LANDIS BOLT CUTTER—THE CHASERS.

ing and adjusting this die, its life is long. As fast as the chaser is worn or ground off it can be set forward until a very short piece is left. To sharpen requires only to grind the ends of the chasers from time to time by means of a small fixture furnished with the machine to be used in connection with any ordinary cutter grinder. The setting is accomplished by means of a gauge, also furnished with the machine, insuring the greatest accuracy.

The clearance in the die is ideal. The chasers stand on lines tangent to the bolt and on angle agreeing with the thread being cut.

To a limited extent the die of a certain

pitch can be set to different sizes. For instance, the five-eighths-inch die, with 11 threads to the inch, can be set to cut 11 threads on any size between three-eighths and one inch.

The chasers are set on an angle agreeing with the pitch of the thread being cut. The cutting is at all times done by the front teeth, while the back do no cutting at all, but take bearing on the work a little back of the face of the chasers, thus forming a permanent lead nut, which always remains the same, no matter how often the chasers are ground, as the die is never ground in the throat.

The chasers are held in grooved blocks, which are secured to oscillating spindles. These spindles move simultaneously to open and close the die. As shown in the cut, the chasers stand out in front of the head, so that threads can be cut up close to the heads of bolts, no projections being beyond the face of the die.

Changing chasers from one set to another requires but a minute. As the chasers require no hobbing, the machine is never tied up to renew the die.

The same chasers will cut either right or left hand threads by cutting on opposite ends and using different chaser holders. They are perfectly interchangeable, and can be replaced irrespective of sets.

Adjustment of the die is simple. A screw follows up the chasers as they are ground off from time to time, and they are held in position by a screw which engages the threads of the chaser. The chasers are adjusted to the size of bolt simultaneously, in the head, with a fine adjustment.

Pipe dies are furnished when desired.

The head is of the most improved type to insure durability and efficiency. There are no wearing parts that can affect the accuracy of the work, and its construction permits of no appreciable wear. Scale or chips cannot enter the wearing parts. There are no exposed sliding surfaces to cause lost motion and inaccuracy. The die opens automatically and closes with the return movement of the carriage.

The head can be made to apply on other makes of machines when desired.

The carriage is of improved form. The

vice has guides centralized over the bolt being held, with clamping screw immediately below, thus eliminating side thrust. The rack is central of the machine, and immediately below the line of the bolt being cut.

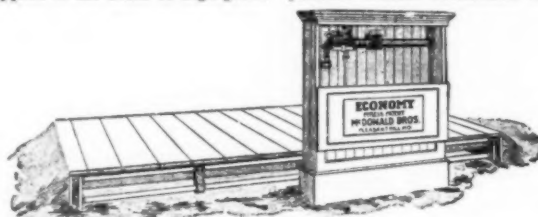
The pump is of positive rotary type. The flow of oil is easily regulated. The oil tank, with cuttings pan, is located inside the base of the machine, where it can be easily removed for emptying and cleaning.

Chasers furnished in U. S. S., Whitworth or V threads.

This cutter is made by the Landis Machine Co. of Waynesboro, Pa.

The Economy Scale.

An accompanying illustration presents a view of the Economy Pitless Wagon and Stock Scale. This machine has been on the market for 12 years, and has proven to be practical, convenient, reliable, and so constructed that it will endure hard service and retain its accuracy for a long period of time. It has special features that will appeal to all users of high-grade



ECONOMY PITLESS WAGON AND STOCK SCALE.

weighing devices. Most important of these features may be mentioned the fact that the scale can be set on level ground or flooring and can be erected for service within a few hours' time, thereby eliminating the troublesome and expensive pit. This equipment is all above ground, and only nine inches high. It requires foundation only under each end frame, the top of foundation level with the surface of the

plete technical description of the scale, fully illustrated, can be obtained from the manufacturers.

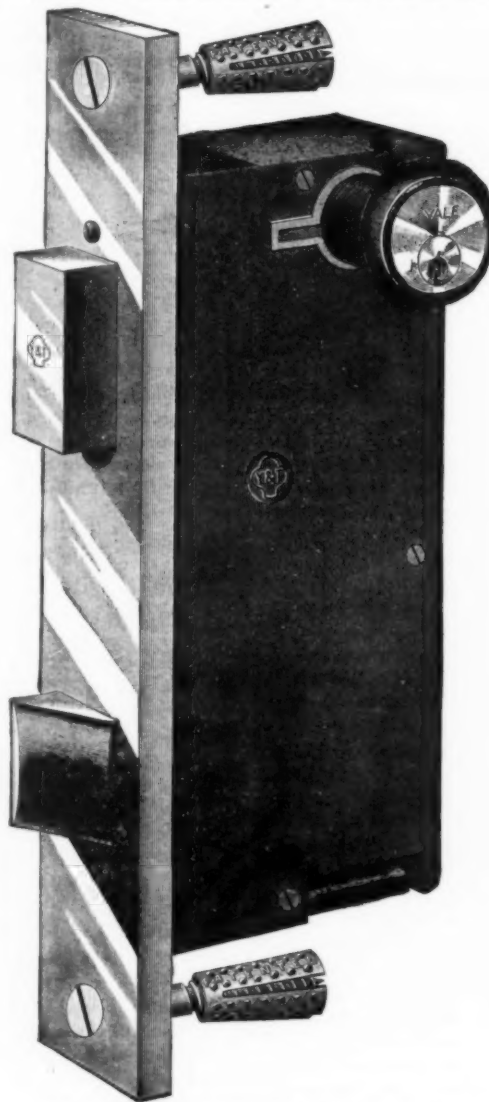
Something New in Expansion Bolts.

For years the impression has been that expansion bolts were only intended for use in masonry, but it is stated by the manufacturer that the Diamond One-Part Expansion Shield illustrated herewith will

hold equally well in wood, and will not work loose.

For fastening down chairs and desks in schoolrooms, stools in stores, opera chairs, locks on doors of passenger coaches, etc., where constant use tends to loosen the screws, the advantages of this shield are at once apparent.

With this shield it is only necessary to bore a hole with an ordinary bit, insert



NEW ONE-PART DIAMOND EXPANSION SHIELD.

earth, eight feet long and eight inches wide. In all other respects as regards workmanship and material the Economy scale is strictly high-grade, and the demand for it becomes daily more urgent. All finished scales are adjusted and sealed according to United States standard, and are fully guaranteed by the manufacturers, Messrs. McDonald Bros. of Pleasant Hill, Mo. Other features of the equipment that may also be referred to are the improved notched compound scale beam. A com-

the shield and run in the screw the same as in wood.

The shield is made with four prongs, which insures a uniform grip in all directions. It is made in standard sizes from one-eighth inch to five-sixteenths inch diameter, to fit wood screws from No. 5 to No. 18, inclusive. Any kind, make or length of wood screw can be used.

The New Jersey Foundry & Machine Co., which manufactures these shields, carries all sizes of the one-part shield in

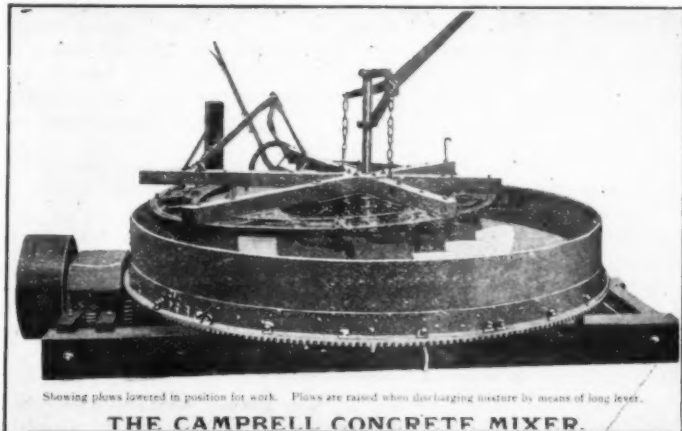
stock, and also of the Diamond two-part expansion shield up to two inches in diameter. The company's offices are at 9 and 15 Murray street, New York.

CEMENT CONSTRUCTION WORK.

Necessity of Thoroughly Mixing the Materials.

A notable feature of engineering during recent years is the great extent to which concrete construction has been adopted throughout the world. It is used by the best-known engineers for the most important work—in constructing dams, fortifications, bridges, breakwaters, sewers, tunnels, foundations, reservoirs, modern office buildings and other structures in which fireproof qualities are demanded, etc. As there is considerable activity in work re-

oughly mixing the materials is emphasized by the engineer. Therefore the kind of mixer used is an important feature of concrete work, and the accompanying illustration will interest. This illustration represents the Campbell Concrete Mixer, which is designed for mixing concrete, mortar, plaster and other similar materials, the latter being always in plain sight. This machine mixes the materials most thoroughly. It not only mixes but rubs the cement into the surface of the rock and sand to the greatest possible extent. Its construction is such that the concrete is always in sight, which is a feature permitting the contractor to judge to a nicety the amount of water needed in the mixing. In charging the rock and sand need not be lifted so high as for some



THE CAMPBELL CONCRETE MIXER.

quiring cement construction throughout the South and Southwest, contractors and builders in that section will be interested in an opinion as to an ideal concrete, advanced by an engineer of many years' experience in important work of this character. He says: "An ideal concrete would be concrete made of clean broken stone or gravel and a clean, coarse, sharp sand free of dust; just enough sand to perfectly fill the void in the broken stone or gravel, and just enough finely-ground Portland cement of the very best quality to perfectly fill the void of the sand. These three ingredients should be mixed together thoroughly while dry, the sand should be equally distributed through the entire mass of rock or gravel and the cement should be equally distributed through the entire mass of stone and sand. Then a clean cold water should be applied if the work is being done in warm weather; if in cold weather, the water should be boiling hot. Sufficient water should be used to allow for the absorption by the rock and sand and cement to turn the cement into a very plastic mortar. The entire mass should then be mixed so thoroughly that every particle of sand and every particle of rock will have a perfect coating of pure Portland cement all over. The concrete should be removed quickly from the mixer, care being taken not to separate the parts that have been mixed together. Then the mix should be placed in the form or mold in a layer not more than five inches thick, and a 36-pound iron rammer with a smooth face about five inches square should be used to set the concrete in place. This part of the work should be done quickly and so thoroughly that the water will come to the surface of the layer; then that surface should be treated with a light coating of dry cement before the next mix is thrown in the form or mold, for during the ramming of the surface the concrete to a certain extent becomes void of cement, and without the application of a dry powder disintegration will take place in time."

It is seen that the necessity of thor-

oughly mixing the materials is emphasized by the engineer. Therefore the kind of mixer used is an important feature of concrete work, and the accompanying illustration will interest. This illustration represents the Campbell Concrete Mixer, which is designed for mixing concrete, mortar, plaster and other similar materials, the latter being always in plain sight. This machine mixes the materials most thoroughly. It not only mixes but rubs the cement into the surface of the rock and sand to the greatest possible extent. Its construction is such that the concrete is always in sight, which is a feature permitting the contractor to judge to a nicety the amount of water needed in the mixing. In charging the rock and sand need not be lifted so high as for some

mixing machines. In operation it drops out the concrete in bulk form. In the half-yard size this mixer requires but four horse-power for its operation, and its first cost is claimed to be considerably less than other similar machines. A prime point of vantage in its working is that it will turn the concrete over 25 times in two minutes, according to the claims of its maker. This feature will at once appeal to the experienced concrete worker.

The Clyde Iron Works of Duluth, Minn., builds the Campbell Concrete Mixer, and invites investigation of the machine's efficiency and economy.

The Emerson Steam Pump.

The opening of the twentieth century, with its marvelous development in the field of manufactures, presents no more interesting study than the development of the art of lifting or pumping water. The water supply of cities, river and harbor improvements, where water must be resisted and removed (i. e., cofferdam work), the growth of irrigation, and not least, the millions invested in the drainage of mines now being operated, the system of filtration and water-works supply all together presents one of the gigantic industries of the times. These facts make it pertinent to bring to the attention of pump-users something new in the line of steam pumps, which are the product of the Emerson Steam Pump Co. of 1410 G street N. W., Washington, D. C.

Thoughtful consideration and thorough investigation of the Emerson pump and appliances is invited.

For irrigation and mining purposes the Emerson is especially valuable.

The company states that the Emerson Steam Pump will handle material successfully that would be entirely impractical to handle at all with other pumps.

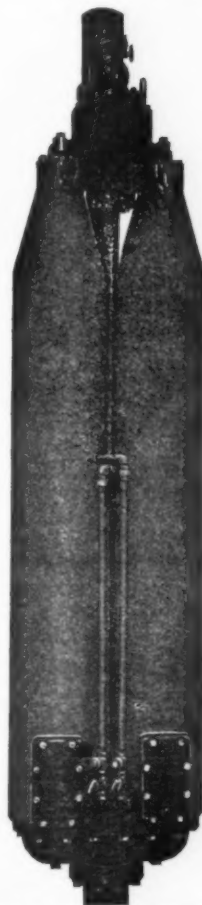
Large percentages of sand, gravel or mud in the water being pumped does not injure the pump or interfere with its working. The construction of the pump as shown will convince you that the purposes for which it can be used are mani-

fold, and in operation these are manifest. It is made for heavy and continuous service in every field for which it is adapted. It is not affected by taking air, will not wreck itself, and will work submerged if necessary.

These pumps have been subjected to the most thorough and exhaustive tests, both technical and practical, by engineers of unquestioned ability, and have not only given satisfaction as to duty and economy in steam consumption, but more than met the expectations of their inventors and designers.

The accompanying illustrations will interest.

The pump consists of two chambers, B and C, side by side, and cast together at the bottom end as shown, each chamber having a valve L at the bottom opening upwards from the common chamber below, into which the suction pipe A enters. Each chamber has a discharge valve R opening upward into the common chamber, from which the discharge or delivery pipe U extends. A small condenser pipe



EMERSON DOUBLE-CYLINDER STEAM PUMP—FRONT.

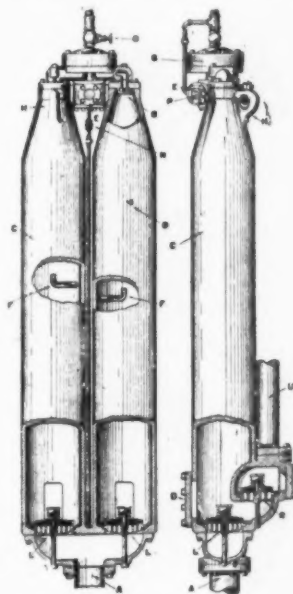
(not shown), into which is a check valve opening upward, is connected to each chamber near the bottom and connects with the condenser nozzle F in the opposite chamber. The valves L and R are easy of access through openings, which are closed by substantial cover plates D. On the top end of each chamber is a flange having attached to its lower or inside face a baffle plate B located opposite the steam port. The other or top side of this flange has a ground ball joint, to which the main steam chest connects. A small air check valve P is screwed into each chamber near the top end. The main steam chest S has a port leading to each chamber and the admission and cut off of steam to each of them is controlled by a flat slide valve so arranged that when steam is being admitted to one of the chambers it is cut off from the other. The motion of this valve is continuous, and it is driven by a small three-cylinder engine E geared back so that the engine runs faster than the valve. The engine is located just below the main steam chest, as shown, and rigidly at-

tached to same. The crankshaft of the engine extends into the steam chest and forms the center bearing around which the slide valve rotates. This engine has no dead centers, and starts from any position. It has no stuffing-boxes, packing nor adjustments of any kind, and the tension on its bearings being always in one direction,



EMERSON DOUBLE-CYLINDER STEAM PUMP—BACK.

it is perfectly silent under any speed and will remain so. The motion of the engine is controlled by opening or closing a small valve N in its exhaust pipe, just below the engine, after leaving which the exhaust pipe passes down (as shown) between the two chambers and connects with the common suction chamber, as shown. There is also a branch valve (not shown) in the



EMERSON DOUBLE-CYLINDER STEAM PUMP—LINE ENGRAVING.

exhaust pipe of the engine, which can be used for controlling the motion of the engine, instead of by the one just named, if desired.

Above the main steam chest S is located a globe valve for regulating the amount of steam that enters the pump to suit conditions. Just above is a small branch pipe,

which supplies steam to the engine which drives the valve. The large globe valve referred to above is for the purpose of regulating the pump, and when the pump is installed a separate valve should be placed in the steam supply pipe in some convenient and accessible place between the pump and the boiler. All the joints of the steam chest and engine are ground joints, metal to metal. No packing is used, nor should any be put in later, or it will disarrange the parts from their proper positions. In designing the pump the relative positions and the timing of the engine parts and valve were made fixed positions that could not be changed and that would never require changing, so that the pump would not be disarranged in the hands of inexperienced operators. Lugs II are cast into each chamber and substantial hooks and ring (not shown) are provided by which the pump is suspended.

Write the Emerson Steam Pump Co. for descriptive pamphlet giving every detail.

New Sheet-Metal Press.

An accompanying illustration shows a new press called the 1904 Adjustable Sheet-Metal Press. The shaft is supported by bearings very close together, this making the shaft so strong that it is almost impossible to spring. Although the press weighs only 365 pounds, yet it has a capacity equal to the maker's ordinary 2200-



NEW SHEET-METAL PRESS.

pound machine of the type manufactured last year. The distance from the bottom of the slide when the stroke and adjustment are up is 87½ inches, allowing for a large variety of work—a gain of 1½ inches over the old model. In many large tin factories there are either wooden benches or tables to lay tin on, and after it is punched the scrap is thrown on another bench or table. These tables or benches are objected to by the insurance companies. In the new press there are adjustable iron shelves on the sides, as seen in the halftone. This is a very valuable improvement, and one that will save a great deal of time and make the floor underneath the press perfectly clean, there being absolutely no necessity for wood.

There is also an additional shelf, which can be readily detached, as there are no bolts, which holds the oil can, monkey-wrench, etc. Although the press is only four or five weeks old, some 35 machines have been sold to different can factories.

The clutch is of high-speed model, enabling the operator to run the press from 25 to 250 revolutions.

The Perkins Machine Co. of Warren, Mass., builds this machine.

MAKING STAPLE ACIDS.

An Electro-Chemical Process Cheapening the Cost of Production.

Mr. E. St. John, for some years vice-president and general manager of the Seaboard Air Line, and prior to that general manager of the Chicago, Rock Island & Pacific Railroad, has recently accepted the presidency of the International Electro-Chemical Co. of Boston, and in a letter to the Manufacturers' Record gives the following information regarding this new undertaking:

"Your letter inviting me to give you, for the benefit of the readers of the Manufacturers' Record, a statement covering 'just what the new organization, the International Electro-Chemical Co., is undertaking to do, etc.' has been received, and it affords me genuine pleasure to comply with such request, but I must preface my communication with the statement that in matters having reference to the science of chemistry I am by no means to be considered as having superior knowledge, much less as being a chemical expert.

"My business experience for the past 40 years or more has been in connection with the intricate problems of railroad transportation, as well as railroad management, and in connection therewith I have been at all times deeply interested not only in the development of the section of country served by the lines with which I was connected, but in the general advancement of the people, in all intended to make for progress and advancement. It has been a pleasure to use my efforts to induce manufacturers of almost every conceivable kind of wares and goods to locate within the territory served, and it has been a privilege and pleasure to visit such factories and carefully observe the various processes of manufacture, as well as the character and quality of the goods produced.

"I have observed the conditions surrounding the manufacture (by the process heretofore in use, and generally, I think, if not universally, in use at this time) of acids, sulphuric and hydrochloric, carbonate of soda and their by-products, and recently have had brought to my notice what seems to me a new and vastly improved process for the manufacture of these articles, and which, I think, can but prove deeply interesting to the investigator, in that the new process produces these goods at a very greatly reduced cost over the old, and at the same time increases the quality of the goods so produced. Expert chemists in whom I have greatest confidence seem enthusiastic over the new discovery, stating that this method for the production of acid is a radical departure from the chamber process, which is the one in use today, in that no leaden chambers are required, nor is there any use for Glovers or Gay-Lussac towers; nitrate of soda is not used, nor any consumption of sulphuric acid, which in the old process acts on nitrate of soda to produce nitric oxide and sulphate of soda. Oxygen from the air does not enter at all into the reaction, and vast quantities of nitrogen do not have to be handled.

"In place of these expensive chambers, towers, complicated apparatus and chemical reactions (which do not appear in the ultimate product), simple devices for handling the required gases, cells to produce the chlorine required and condensing and distilling apparatus of the simplest form is all that is used.

"The sulphur dioxide is oxydized with chlorine in accordance with a well-known reaction familiar to and accepted by all chemists, the chlorine by this action becoming hydrochloric acid. The water used is the least required to produce results, and strong sulphuric and hydrochloric acids are the products. Where nitrate of soda is wasted in the old process, chlorine is made a valuable product in the new.

Where impure, weak acid is produced in the chamber, a strong, pure acid is delivered from the condensers; where high-cost chambers are required, inexpensive glass and porcelain are used. In each part of the new process a distinct saving is effected over the old, and in the final results a better product is had at a less cost.

"This process is, however, rendered commercially possible only on account of development of economical and low-priced electrolytic cells, and the opportunity to procure power at a price that makes the cost of chlorine a nominal figure. With this low-priced power, with no waste products or unsalable by-products, acids of high strength and great purity are made at very low cost.

"Sulphuric and hydrochloric acids and carbonate of soda are staple products for which there is an ever-increasing demand and an unlimited market. The census reports show that there are in the United States 127 factories manufacturing sulphuric and hydrochloric acids, with an invested capital of approximately \$200,000,000. The census reports also show that the output has increased more than 100 per cent. during the past 10 years, and that there is a corresponding increase in the demand.

"Sulphuric acid is largely used in the manufacture of fertilizers, by all iron and steel manufacturers, by all brass manufacturers, in the refining of oils, in the treatment of gold, silver, lead and copper ores, in the manufacture of paper of various kinds and for various purposes. It is also used by dyeing establishments, bleacheries and scores upon scores of other industries, and new and important uses are being found for it almost daily. The market, therefore, seems very firmly established.

"This company's intentions are to manufacture these important staples by its new and improved process at a great reduction in cost from that now required to produce them by old methods, which, it is claimed, have practically remained the same for almost a century.

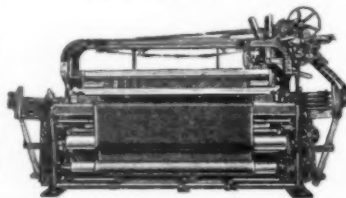
"The directors and officers of the company will be glad to meet and to take persons interested in the manufacture of these goods, and who have any desire to become interested, to its demonstration plant in daily operation in Greater Boston, where the practical workings of the new discovery may be seen and explained to them.

"We believe the company has a great future, and we hope to see at no distant date a large plant established in the South, where personally I have many friends and acquaintances, and where I have enjoyed a considerable number of years in an effort to advance its every interest."

Crompton-Thayer Worsted Loom.

It will interest our readers to see an illustration of the Crompton-Thayer Loom Co.'s new worsted loom. Many practical mill men who have already visited Worcester to see this loom have been pleasantly surprised.

The new loom impresses everyone with



NEW CROMPTON-THAYER WORSTED LOOM.

the symmetry of its design, simplicity of its motions and the excellence of its workmanship.

A number of orders for this loom have been filed, and the company's growing business has compelled it to enlarge the present works.

During the summer months will be completed the medium-weight worsted loom and the cassimere loom, and in the fall the company will introduce a light-weight worsted loom, thus completing its line of worsted and woolen looms. The Crompton-Thayer Loom Co. can be addressed at Worcester, Mass., for further information regarding its improved weaving machinery.

STEEL REPLACING IRON.

An English View of the Changes of Twenty-Odd Years.

In commenting upon the fact that the total output of manufactured iron in Great Britain in 1903 was 950,393 tons, the lowest figure yet reached since this great industry took its rise at the time of the expansion of British railway and steamship interests between 1850 and 1870, the London Iron and Coal Trades Review points out that though the volume of the output has shrunk from 2,841,534 tons in 1881, the finished iron trade industry retains here and there a good deal of vitality, and that it will never, perhaps, entirely expire, and it says:

"In Europe the four principal iron-making countries—Great Britain, Germany, France and Belgium—which produced 5,250,000 tons of finished iron in 1889, reduced that output to 2,749,000 tons in 1902, but in the same period they increased their output of steel ingots from less than 6,000,000 to fully 13,500,000 tons. In the United States the transformation has been even more startling, for the output of finished iron is not now more than 1,000,000 tons, against some 16,000,000 tons of steel. The recent decay of the finished iron trade is not, however, so notable as that of 10 or 15 years ago. In the six years ending 1895 our annual output of puddled bar decreased by well over 1,000,000 tons. In the last six years the decrease has not been more than one-seventh of this quantity. The process of decay has apparently been notably arrested for the time. We hardly think, however, that this can be accepted as involving or being due to a renaissance of the finished iron industry. Certain mechanical products have always been manufactured in wrought iron, and it is probable that they always will be. The country blacksmith still lingers lovingly over a piece of bar iron which he can forge without any misgiving as to whether it may not at a critical point disappoint his hopes and expectations. There are still boiler-users and not a few engineers who specify 'best Yorkshire' iron, after the fashion of a generation ago, and we can only recall one 'Yorkshire iron' works that has so far succumbed to the stress of modern preferences for other material. * * *

Comparing the country as a whole, our production of iron shows a loss in 20 years of 1,853,000 tons. A concurrent increase of 2,854,000 tons has taken place in the output of open-hearth steel, while in Bessemer steel the output of 1903 was 154,000 tons under that of 1882, bringing up the total steel increase to about 3,008,000 tons.

"Those who are disposed to adopt a rest-and-be-thankful policy may be satisfied with this record. Those who desire to see Great Britain make the same advances as her rivals will not. We have lost ground in the finished iron manufacture in common with all our rivals, and such loss was inevitable and more or less beneficial in respect of aiding the establishment of a superior and generally cheaper material of construction. But while the cheaper material has with us been adding a trifle over 3,000,000 tons to its annual output, it has added more than twice that figure in Germany, and four to five times that quantity in the United States."

The Georgia Rough & Cut Stone Co. of Augusta has been given a contract for 600,000 Belgian blocks for Chicago.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

BALTIMORE BUILDING NOTES.

Business Buildings.

Baltimore—Store Building.—Ernest A. Kiehne, 712 East Baltimore street, has commissioned W. H. Shaw, architect, 434 Twenty-second street, to prepare plans and specifications for store building to be located at 607 and 609 East Baltimore street. Structure to be four stories high, 30x95 feet; Roman-brick front with terra-cotta trimmings; concrete foundations; steel beams and girders; cast-iron columns; steel ceiling for three upper stories; first story and cellar entirely fireproof; electric wiring and fixtures; gas fixtures; sanitary plumbing; steam-heating system; power elevator; cost to be about \$15,000.

Baltimore—Warehouse.—W. H. Shaw, architect, 434 Twenty-second street, has been commissioned to prepare plans and specifications for remodeling warehouse located at 322 West Baltimore street. Structure to be five stories high, 33x165 feet; steel beams and girders; cast-iron columns; maple flooring; steel ceilings; slag roofing; prismatic and plate glass; electric wiring and fixtures; sanitary plumbing; steam-heating system; power passenger and freight elevators; cost to be about \$10,000.

Baltimore—Warehouses.—Richard C. Norris and Dr. Martin J. Cromwell, 516 Park avenue, have commissioned Worthington & Ahrens, architects, 8 East Lexington street, to prepare plans and specifications for two warehouses to be located at 34 and 36 Hanover street. Structures to be five stories high, 46.6x107 feet; brick front with copper trimmings; concrete foundations; steel beams and girders; tin roofing; galvanized-iron cornices; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevators; cost to be about \$45,000. Edward Brady & Son, builders, 1109 Cathedral street, have the contract for the construction.

Baltimore—Bank Building.—Joshua Levering, 1316 Eutaw Place; John K. Shaw, 28 West Lexington street, and Wilton Snowden, Central Savings Bank Building, Charles and

Lexington streets, have been appointed as a building committee by the National Bank of Baltimore, 333 North Charles street, to select the architect and manage the details concerning the construction of its new building, which is to be a one-story structure devoted to the exclusive use of the bank.

Baltimore—The American Building.—The Baltimore American has announced full details regarding its building, which has been previously reported. Structure to be 16 stories high, 77x127 feet; light-colored pressed-brick front with Indiana limestone base and architectural terra-cotta trimmings; concrete foundations; steel-frame fireproof construction; metal window frames and sashes glazed with wireglass; 350 offices, with safety vaults in each suite; fire-escape; mail chute; pneumatic-tube transportation system; ornamental cast-iron and plate-glass store fronts; all first-story vestibules, lobbies and corridors and counting-room will have English-Italian marble wainscot; the jambs of doors and windows to be of white marble; electric wiring and fixtures; sanitary plumbing; steam-heating system; complete electric generating plant for lighting and power purposes; three electric passenger elevators. The newspaper plant will consist of two double-sexuple presses with capacity of 100,000 papers per hour and 25 Mergenthaler Linotype machines; cost of building will be about \$500,000, and mechanical equipment about \$250,000. Otto G. Simonson, architect, Hoen Building, Lexington and North streets, prepared the plans and specifications; Clinton & Russell, architects, New York, are the consulting architects; Adams & Schwab, 7 Clay street, the consulting engineers, and the George A. Fuller Construction Co., builder, Hoen Building, North and Lexington streets, has the contract for the construction.

Baltimore—Warehouse.—The James Cary estate has awarded contract to John Cowan, builder, 106 West Madison street, for erection of warehouse to be located at 21 South Charles street after plans and specifications by Elliott & Emmart, architects, 223 North Charles street. Structure to be three stories high, 18.4x100 feet; brick front with terra-cotta trimmings; concrete foundation; steel beams; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; elevator; cost to be about \$15,000.

Baltimore—Warehouses.—The Board of Trustees of the Johns Hopkins Hospital Trust Estate, 211 North Charles street, has awarded contract to James Stewart & Co., builders, 319 North Charles street, for erection of nine warehouses to be located at northwest corner Light and Pratt streets after plans and specifications by Sperry, York & Sawyer, architects, Builders' Exchange Building, Charles and Lexington streets. Structures to be five stories high, 23.6x77.2 feet; red-brick fronts with granite base and architectural terra-cotta trimmings; concrete foundations on piling; steel beams and girders; cast-iron columns; mill construction; tin roofing; nine fire-escapes; metal frames and sashes glazed with wireglass; galvanized-iron skylights; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevators; cost to be about \$250,000. These buildings previously reported.

Baltimore—Store Building.—Estate of Columbus O'Donnell has awarded contract to Joseph Schamberger, builder, 2214 Boyer street, for erection of store building to be located at 507 East Baltimore street after plans and specifications by Worthington & Ahrens, architects, 8 East Lexington street. Structure to be three stories high, 20x66 feet; brick front with stone trimmings; concrete foundations; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost to be about \$6000. This building previously reported.

Baltimore—Hotel.—Alexander Yearley & Sons, Builders' Exchange Building, Charles and Lexington streets, as agents for the owners, have awarded contract to George Bunnecke & Sons, builders, 305 St. Paul street, for erection of back building and general repair of building located at 11 North Eutaw street. Structure to be three stories high, 19x30 feet; brick with stone trimmings; concrete foundation; tin roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost to be about \$6000. This building will be conducted as a hotel by N. P. J. Verel, 216 North Fulton avenue.

Baltimore—Store Building.—Harris & Thompson, 216 St. Paul street, as trustees

for the Robinson estate, will erect store building to be located at 15 East Baltimore street after plans and specifications by Henry Brauns, 113 West Saratoga street. Structure to be four stories high with basement, 22.2x80 feet, and back building one story high with basement, 22.2x63.8 feet; brick front with architectural terra-cotta trimmings; granite base; concrete foundation; steel beams and girders; cast-iron columns; tin roofing; copper cornice; mosaic floor; fireproof partitions; metal frames and sashes; wireglass; galvanized-iron skylight glazed with wireglass; electric wiring and fixtures; sanitary plumbing; radiators to be used with outside heating system; power elevator. Elevator and electric wiring and fixtures not included in contract. John Cowan, 106 West Madison street; the Chas. McCall Company, 123 West Saratoga street; J. H. Miller, 110 Dover street; Morrow Bros., 212 Clay street, and J. J. Walsh & Son, 1529 Maryland avenue, have been selected to bid on the construction. Bids to be in June 17.

Baltimore—Warehouses.—Further details have been obtained concerning warehouses for the S. H. Janney heirs, Francis White, 341 North Charles street, trustee, to be located at 400, 402, 404 and 406 Exchange Place, plans and specifications for which were prepared by Archer & Allen, architects, Central Savings Bank Building, Charles and Lexington streets. Structures to be four stories high with basement, 88.5x94 feet; brick front with granite base and artificial-stone or terra-cotta trimmings; concrete foundations; steel beams and girders; cast-iron columns; slag roofing; concrete pavement; fireproof vaults; fire shutters; fire-escape; electric wiring and fixtures; sanitary plumbing; steam-heating system; four power elevators; cost to be about \$50,000. Heating system, electric wiring and fixtures, elevators, fire-escape, window gratings, gas fixtures, counters and railings are not included in contract. Wm. Ferguson & Bro., 214 Clay street; John Cowan, 106 West Madison street; Henry Smith & Sons Company, 116 South Register street; Cramp & Co., 407 St. Paul street, and James Stewart & Co., 319 North Charles street, have been selected to bid on the construction. Bids to be in June 15.

Baltimore—Store Building.—Frederick Henkleman, 21 East Saratoga street, as trustee for the Henkleman estate, has awarded contract to Wm. Ferguson & Bro., builders, 214 Clay street, for erection of store building to be located at 221 and 223 East Baltimore street after plans and specifications by Torrey & Leach, architects, 235 St. Paul street. Structure to be four stories high, 27x103.6 feet; brick with Indiana limestone base and architectural terra-cotta trimmings; concrete foundation; tin roofing; galvanized-iron cornice; metal frames and sashes glazed with wireglass in rear; metal ceilings first and second stories; ornamental-iron grillwork; prismatic lights; electric wiring and fixtures; sanitary plumbing; steam-heating system; electric elevator. This building previously reported.

Baltimore—Warehouses.—Lewis N. Hopkins, 1510 Park avenue, represented by Ritchie & Janney, Calvert street, near Lexington, will erect warehouses to be located on Lombard and Balderston streets and Grant and Elliott streets after plans and specifications by Charles E. Cassell & Son, architects, 411 North Charles street. Structures to be four stories high, one 45x80.10 feet and the other 34x60 feet; salmon-brick front with terra-cotta trimmings; concrete foundations; steel beams and girders; cast-iron columns; tin roofing; galvanized-iron cornices; electric wiring and fixtures; sanitary plumbing; two electric elevators; cost to be about \$35,000. Elevators, heating, electric work, plumbing, gaspiping, glass and sidewalk paving not included in contract. Henderson & Co., Ltd., 218 West Fayette street; Kendrick & Roberts, Inc., 216 North Liberty street; John Waters, 23 East Centre street; Wm. B. Ferguson & Bro., 214 Clay street; J. H. Walsh & Bro., 406 South Charles street; Farley & Monmonier, 17 North Frederick street; Frank B. Gilbreth, 211 North Liberty street, and Wm. Steele & Sons, 17 West Saratoga street, have been selected to bid on the construction. Bids to be in June 13.

Baltimore—Office Building.—The Maryland Life Insurance Co., Wm. H. Blackford, president, temporarily located at 410 West Fayette street, has commissioned Parker & Thomas, architects, 612 North Calvert street, to prepare plans and specifications for its office building to be located at 8 and 10 South street, and has selected Wm. H. Blackford, chairman, 410 West Fayette street; Eugene

Levering, 28 West Lexington street; Douglas H. Thomas, 309 Cathedral street, and Blanchard Randall, 7 Wilson Building, Charles and Saratoga streets, as a building committee to work with the architects in the matter of selecting a suitable design for its building.

Baltimore—Store Buildings.—Further details have been obtained concerning three store buildings for J. Winfield Henry, trustee, 107 West Monument street, to be located at 100 North Charles street and 2, 4 and 6 West Fayette street, and plans and specifications for which were prepared by Haskell & Barnes, architects, Central Savings Bank Building, Charles and Lexington streets. Structures to be five stories high with basement, 25.5x70.1 feet, 50.2x52.2 feet, 25.1x52.2 feet; buff brick fronts with granite base and terra-cotta trimmings; concrete foundations; steel beams and girders; cast-iron columns; tin roofing; galvanized-iron cornice; galvanized-iron skylight glazed with wireglass; pavement lights; concrete pavement; mosaic floor; fire shutters; steel ceilings; electric wiring and fixtures; sanitary plumbing; steam-heating systems; three electric elevators; three hand pavement lifts. Elevators and heating system not included in contract. George A. Fuller Co., Hoen Building, North and Lexington streets; Wm. Steele & Sons, 17 West Saratoga street; Wm. Ferguson & Bro., 214 Clay street; Edw. D. Preston, Builders' Exchange Building, Charles and Lexington streets; John Hiltz, 3 Clay street; Thomas L. Jones & Son, 410 West Saratoga street, and John Cowan, 106 West Madison street, have been selected to bid on the construction. Bids to be in June 23.

Baltimore—Warehouses.—The Safe Deposit & Trust Co., 13 South street, as trustee, has commissioned Mottu & White, architects, 402 St. Paul street, to prepare plans and specifications for two warehouses to be located on northeast corner Pratt and Frederick streets. Structures to be three stories high, 52x42 feet; brick with stone trimmings; concrete foundation; steel beams; tin or slag roofing; galvanized-iron cornices; electric wiring and fixtures; sanitary plumbing; elevator.

Baltimore—Warehouse.—The Safe Deposit & Trust Co., 13 South street, as trustee, has commissioned Mottu & White, architects, 402 St. Paul street, to prepare plans and specifications for warehouse to be located at 411 Exchange Place. Structure to be three stories high, 22x70 feet; brick with stone trimmings; concrete foundation; steel beams; tin or slag roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator.

Baltimore—Warehouse.—Thomas Hughes, 223 St. Paul street, as attorney for the C. Y. Davidson estate, has awarded contract to James F. Morgan, builder, 1300 S. Charles street, for the reconstruction of warehouse located at 5 North Liberty street. Structure to be four stories high, 27.5x82 feet; iron front; steel beams and girders; cast-iron columns; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator; cost to be about \$9000. This building previously reported.

Baltimore—Warehouses.—Revised plans and specifications have been made by Louis Levi, architect, Central Savings Bank Building, Charles and Lexington streets, for the three warehouses for Simon Rosenberg, 107 North Howard street; Burgunder Bros., 307 West German street, and Hamburger Bros., 16 South Eutaw street, to be located at 36, 38 and 40 Hopkins Place. Structures are to be five stories high, 72x126 feet. Morrow Bros., 212 Clay street; George Bunnecke & Sons, 305 St. Paul street; James Stewart, 319 North Charles street, and Sullivan & Sons Co., 17 East Saratoga street, have been selected to rebid on the construction. Bids to be in June 15.

Baltimore—Warehouse.—Further details have been obtained concerning warehouse for James G. Stanley, 1218 North Charles street, to be located at 129 South Charles street, plans and specifications for which were prepared by T. George Carroll, architect, 1063 St. Paul street. Structure to be four stories high, 17x55 feet; brick with granite trimmings; granite base; concrete foundation; steel beams; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator; cost to be about \$6000. Brady & Watters, 532 St. Paul street; Thomas L. Jones & Son, 410 West Saratoga street; Edward Brady & Son, 1109 Cathedral street, and George A. Blake, 120 East Lexington street, have been selected to bid on the construction. Bids to be in June 18.

Baltimore—Warehouse.—The Sheppard and Enoch Pratt Hospital, 317 North Charles street, has awarded contract to John Cowan, builder, 106 West Madison street, for construction of warehouse to be located at 23 and 25 South Charles street after plans and specifications by Charles E. Cassell & Son, architects, 411 North Charles street. Structure to be six stories high, 60x150 feet; brick with terra-cotta trimmings; concrete foundation; steel beams and girders; cast-iron columns; tin roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevators; cost to be about \$60,000. Muth Bros. & Co., wholesale druggists, temporarily located at 131 South Howard street, will occupy the building. This building previously reported.

Baltimore—Church Building.—The Trinity English Lutheran congregation has awarded contract to A. Knell, Jr., builder, 100 East Saratoga street, for construction of its church building to be located at Pulaski and Baltimore streets after plans and specifications by Haskell & Barnes, architects, Central Savings Bank Building, Charles and Lexington streets. Structure to be of stone; concrete foundation; slate roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost to be about \$20,000. This building previously reported.

Baltimore—Warehouses.—Channing Lilly and the Safe Deposit & Trust Co., 13 South street, will award contract to Burnham & Wells, builders, Builders' Exchange Building, Charles and Lexington streets, for construction of two warehouses to be located at 26 and 28 Hanover street after plans and specifications by Sperry, York & Sawyer, architects, Builders' Exchange Building. Structures to be five stories high, 50x107.6 feet; brick front with architectural terra-cotta and ornamental cast-iron trimmings; granite base; concrete foundations; steel beams and girders; cast-iron columns; tin roofing; fireproof vault; fire-escape; copper frames and sashes glazed with wireglass; galvanized-iron skylights; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevators; cost to be about \$60,000. These buildings previously reported.

Baltimore—Warehouse.—Frank T. Kirby, Westport, has awarded contract to Frederick Burger, builder, 1729 St. Paul street, for construction of warehouse to be located at 716 and 718 West German street after plans and specifications by Hoyt & Mackintosh, architects, 11 East Pleasant street. Structure to be four stories high, 32x56 feet; brick with stone trimmings; concrete foundation; steel beams and girders; cast-iron columns; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator; cost to be about \$9000. This building previously reported.

Baltimore—Store Buildings.—The Dunnington Estate, 321 East Pratt street, has commissioned Sperry, York & Sawyer, architects, Builders' Exchange Building, Charles and Lexington streets, to prepare plans and specifications for two store buildings to be located at 110 and 112 East Baltimore street.

Baltimore—Store Building.—Benj. Berry, 435 West Lexington street, has awarded contract to Joseph Schamberger, builder, 2214 Boyer street, for construction of store building to be located at 509 East Baltimore street. Structure to be three stories high, 20x66 feet; brick with stone trimmings; concrete foundation; steel beams; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost to be about \$6000.

Baltimore—Store Buildings.—Mrs. Rebecca Braunstein, 20 Centre Market Space, has awarded contract to the Welzant Zion Co., builder, 721 South Broadway, for construction of two store buildings to be located at 20 Centre Market Space after plans and specifications by Henry J. Tinley, architect, 421 St. Paul street. Structures to be three stories high, 25x60 feet; brick with granite base and trimmings; concrete foundation; steel beams; tin roofing; galvanized-iron cornice; sanitary plumbing; gas fixtures.

Baltimore—Store Building.—Wm. L. Luther has commissioned Henry J. Tinley, architect, 421 St. Paul street, to prepare plans and specifications for store building to be located at 26 Centre Market Space. Structure to be three stories high, 25x63 feet; brick with stone trimmings; concrete foundation; tin roofing; galvanized-iron cornice; sanitary plumbing; gas fixtures.

Baltimore—Store Building.—Louis Levin & Sons will erect for themselves store building to be located on Exeter street, near Fayette, after plans and specifications by Z. F. Potter, architect, 2507 Fairmount avenue. Structure to be three stories high, 24x35 feet; brick with stone trimmings; concrete foundation;

tin roofing; galvanized-iron cornice; sanitary plumbing; gas fixtures; cost to be about \$4000.

Baltimore—Dwellings.—Henry E. Cook, 509 East Monument street, will erect himself 17 dwellings to be located on Townsend street, near Washington, after plans and specifications by E. J. Storck, architect. Structures to be two stories high, 15x75 feet; brick with stone trimmings; tin roofing; galvanized-iron cornices; sanitary plumbing; gas fixtures; furnace-heating systems; cost to be about \$17,000.

Baltimore—Store Building.—The Safe Deposit & Trust Co., 13 South street, as trustee, will erect store building to be located at 108 East Baltimore street after plans and specifications by Sperry, York & Sawyer, architects, Builders' Exchange Building, Charles and Lexington streets. Structure to be three stories high, 23.2x36.8 feet; granite base; brick with terra-cotta and marble trimmings; concrete foundation; steel beams; tin roofing; galvanized-iron cornice; granolithic pavement; pavement lights; coal doors; copper frames and sashes glazed with wireglass; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator. Electric wiring and fixtures, sanitary plumbing and heating system not included in contract. Burnham & Wells, Builders' Exchange Building; Charles L. Stockhausen, 414 East Fayette street; Frank B. Gilbreth, 211 North Liberty street; John Hildebrand, 206 Little Sharp street; John Cowan, 106 West Madison street, and Edw. Brady & Sons, 1109 Cathedral street, have been selected to bid on the construction. Bids to be in June 18.

Baltimore—Office Building.—Further details have been obtained concerning office building for George Gunther, 3d and Toone

proof roof; metal frames and sashes glazed with wireglass; galvanized-iron skylight; electric wiring and fixtures; sanitary plumbing; steam-heating system; electric freight elevator; cost to be about \$30,000. This building previously reported.

Baltimore—Warehouse.—The Louis Becker Company, distillers, temporarily located at 1523 West Baltimore street, has leased the property located at southwest corner Light and German streets and will erect warehouse on the site. Structure to be four stories high, 22x116 feet; brick with stone trimmings; concrete foundation; steel beams; tin or slag roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator.

Baltimore—Warehouses.—Further details have been obtained concerning nine warehouses for the Safe Deposit & Trust Co., 13 South street, to be located on Light and Lombard streets, plans and specifications for which were prepared by Ellicott & Emmart, architects, 323 North Charles street. Structures to be four stories high with basements, 200x51 feet; granite base; gray-brick fronts with ornamental terra-cotta and galvanized-iron trimmings; concrete foundations; steel beams; slag roofing; galvanized-iron cornices; fire shutters; metal frames and sashes glazed with wireglass; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevators; cost to be about \$90,000. Charles Gilpin, 21 East Saratoga street; John R. Wiggins, 323 St. Paul street; Cramp & Co., 407 St. Paul street; Wm. Steele & Sons, 17 West Saratoga street; Thompson-Starrett Company, 606 North Charles street; Richardson & Burgess, Inc., 1065 Linden avenue; R. C. Ballinger & Co., 21 West Saratoga street; Henderson & Co., Ltd., 218 West Fayette street; Charles McCaul Company, 123

contract to Henry Smith & Sons Company, builder, 118 South Regester street, for construction of warehouse to be located at 46 West Baltimore street after plans and specifications by Charles E. Cassell & Son, architects, 411 North Charles street. Structure to be five stories high, 22.6x31.5 feet; brick with ornamental terra-cotta trimmings; concrete foundation; steel beams; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator; cost to be about \$30,000. This building previously reported.

Baltimore—Hotel.—The Merchants and Manufacturers' Association, 215 North Charles street, which has been furthering the merchants' hotel project, has decided to incorporate under the name of Merchants' Hotel Co., and will erect a seven-story building, 51.10x140.6 feet, to be located on old Howard House site on Howard street, near Baltimore. This building will contain 144 sleeping-rooms and will cost complete about \$200,000, divided as follows: Building, \$100,000; furnishings, \$35,000; lighting, heating and refrigerating plant, \$15,000; site, \$62,500.

Baltimore—Dwellings.—E. B. Hunting, 213 Courtland street, has purchased a lot on Huntingdon avenue, near Oak street, 150x50 feet, and will erect a number of two-story dwellings on the property.

Baltimore—Store Building.—Mrs. Levi will erect store building to be located at 423 East Baltimore street after plans and specifications by J. E. Laferty, architect, Builders' Exchange Building, Charles and Lexington streets. Structure to be three stories high with basement, 16x66 feet; brick with stone trimmings; concrete foundation; steel beams; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system. Plans are now in hands of selected bidders.

Baltimore—Elks' Hall.—The Baltimore Lodge No. 7, B. P. O. E., 307 West Fayette street, will erect addition to its hall on Fayette street after plans and specifications by Alfred Mason, architect, 746 West Baltimore street. Structure to be three stories high, 25.10x74 feet; brick with stone trimmings; steel beams; tin roofing; fire-escape; asbestos flooring; sanitary plumbing; gas fixtures. Electric wiring and fixtures and steam-heating system not included in contract. Plans are now in hands of selected bidders. Bids to be in June 21.

Baltimore—Church Building.—St. Michael's and All Angels' P. E. Church, Rev. J. G. Murray, pastor, St. Paul and 20th streets, has awarded contract to L. J. Brown, builder, 2908 Huntingdon avenue, for erection of church building to be located at southeast corner Huntingdon avenue and 27th street after plans and specifications by Wyatt & Nolting, architects, Builders' Exchange Building, Charles and Lexington streets. Structure to be two stories high, 40.8x110.3 feet; stone base; frame construction; slate roofing; gas fixtures; sanitary plumbing; cost to be about \$15,000.

Baltimore—School Buildings.—Henry D. Perky, who recently purchased the Filston Farm, Glencoe, Baltimore county, Maryland, will establish there an institute of domestic science, and has awarded contract to Henderson & Co., Ltd., builders, 218 W. Fayette street, for erection of auditorium group of buildings and office building. Auditorium building to be two and one-half stories high, 186.6x159 feet, and office building two stories high, 46.8x46.8 feet; cut-stone base; frame construction covered with wire lathing cement plastered; concrete foundation; steel beams; cast-iron columns; shingle roof; steel ceiling in kitchen; refrigerator room; galvanized-iron skylight. Plans and specifications for these buildings were prepared by Esenwein & Johnson, architects, 777 Ellicott Square, Buffalo, N. Y. These buildings previously reported.

Baltimore—Business Building.—The International Syndicate Co., 17 and 19 Little Sharp street, has purchased the property located at 213, 215 and 217 North street and commissioned the Woodruff-McLaughlin Company, constructing engineer and architect, 102 E. Lexington street, to prepare plans and specifications for building to be erected on the site. Structure to be six stories high with basement, 50x100 feet; pressed-brick front with cut-stone trimmings; concrete foundation; steel beams; slag roofing; ordinary construction; electric wiring and fixtures; sanitary plumbing; steam-heating system; electric elevators; boilers; engines.

Baltimore—Restaurant.—Michael W. Ganzhorn, 26 Augusta avenue, has commissioned Baldwin & Pennington, architects, 311 N. Charles street, to prepare plans and specifications for restaurant to be located at 11½ Hopkins Place. Structure to be three stories high, 21x100 feet; brick with terra-cotta trimmings; concrete foundation; tin or slag

Detailed Information

As to every building to be erected in Baltimore, its character, size, method of lighting, heating, etc., is published by the MANUFACTURERS' RECORD. Every industrial and railroad enterprise, every municipal improvement, every important building projected in the whole South is covered with the same painstaking detail in advance of all other publications. Those who need this information daily can find it in the *Daily Bulletin of the Manufacturers' Record*, subscription price \$25 a year. The *Daily Bulletin* is published every business day in the year for the purpose of enabling manufacturers, contractors, engineers and others to keep in daily touch with the rebuilding of Baltimore and the industrial, railroad and financial development of the South and Southwest.

streets, Canton, to be located at northwest corner St. Paul and Fayette streets, plans and specifications for which were prepared by Simonson & Pietsch, architects, Hoen Building, Lexington and North streets. Structure to be eight stories high, 30x58.6 feet; granite base; Bedford limestone to second story, buff brick with granite and architectural terra-cotta trimmings for remaining stories; concrete foundation; steel beams and girders and cast-iron columns covered with fireproof material; slag roofing; fireproof throughout; arched concrete or terra-cotta floors and roof; fireproof office vaults; pavement lights; galvanized-iron skylights glazed with wireglass; metal frames and sashes; terrazzo floors; metal lathing; marble wainscots; bronze thresholds; electric wiring and fixtures; sanitary plumbing; steam-heating system; power passenger elevator; cost to be about \$85,000. Electric wiring and fixtures, heating system and elevator not included in contract. Joseph Schamberger, 2214 Boyer street; Henry Rippel, 7 Clay street; Henry Smith & Sons Company, 116 South Regester street; Brady & Watters, 532 St. Paul street; M. C. Davis, Builders' Exchange Building, Charles and Lexington streets; D. W. & G. H. Thomas, 419 North Charles street, have been selected to bid on the construction. Bids to be in June 27.

Baltimore—Warehouse.—Judge Henry Stockbridge, courthouse, has awarded contract to Henry Smith & Sons Company, builder, 116 South Regester street, for construction of warehouse to be located at 32 Hanover street after plans and specifications by Simonson & Pietsch, architects, Hoen Building, Lexington and North streets. Structure to be five stories high, 28.2x107.6 feet; pressed-brick front with terra-cotta trimmings; stone base; concrete foundation; steel beams; slow-burning construction; fire-

West Saratoga street; J. H. Miller, 110 Dover street; Murphy Construction Co., 332 North Liberty street; James Stewart & Co., 319 North Charles street, and D. W. & G. H. Thomas, 419 North Charles street, have been selected to bid on the construction. Bids to be in June 25.

Baltimore—Store Building.—W. J. A. Bliss, 1017 St. Paul street, has awarded contract to George Bunnecke & Sons, builders, 305 St. Paul street, for construction of store building to be located at 28 East Baltimore street after plans and specifications by J. Appleton Wilson, architect, 303 Courtland street. Structure to be three stories high, 17.4x105 feet; brick with buff-stone trimmings; concrete foundation; steel beams; tin roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; plate-glass store front. This building previously reported.

Baltimore—Store Building.—John A. Barker & Son, 14 East Lexington street, as agents, will erect store building to be located at 14 North Charles street after plans and specifications by J. Appleton Wilson, architect, 303 Courtland street. Structure to be four stories high, 22.4x73.11 feet; brick front with white-marble base and trimmings; concrete foundation; steel beams; cast-iron lintels; tin roofing; galvanized-iron cornice; prismatic glass; granolithic pavement; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator. Wm. Ferguson & Bro., 214 Clay street; Henry Smith & Sons Company, 116 South Regester street; John Cowan, 106 West Madison street, and John Hiltz & Son, 3 Clay street, have been selected to bid on the construction. Bids to be in June 20. This building previously reported.

Baltimore—Warehouse.—Mrs. Sarah G. Rosenstock, 2020 Eutaw Place, has awarded

roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system. This building previously reported.

Baltimore—Office Building.—The Maryland Casualty Co., St. Paul and Monument streets, has decided to erect a three-story office building on its site on North street running from Baltimore to Fayette streets, and the Third National Bank, 221 N. Charles street, will be located in the Baltimore-street end of the building. Parker & Thomas, architects, 612 N. Calvert street, are preparing the plans and specifications for the building.

Baltimore—Warehouse.—Dr. Henry J. Berkeley, 1305 Park avenue, has awarded contract to R. H. Frazier & Sons, builders, 220 St. Paul street, for erection of warehouse to be located at 200 W. Lombard street. Structure to be four stories high, 16x50 feet; brick with buff-stone trimmings; granite base; concrete foundation; tin roofing; copper cornice; fire shutters; fireproof vault; fire-escape; coal chute; metal ceiling; electric wiring and fixtures; sanitary plumbing; hand elevator. This building previously reported.

Baltimore—Warehouse.—Henry White has awarded contract to Charles Gilpin, builder, 21 E. Saratoga street, for erection of warehouse to be located at 17 and 19 W. Baltimore street after plans and specifications by Wyatt & Nolting, architects, Builders' Exchange Building, Charles and Lexington streets. Structure to be six stories high, 43x96 feet; brick with architectural terra-cotta trimmings; granite base; concrete foundation; steel beams and girders; cast-iron columns; tin roofing; terra-cotta cornices; reinforced concrete pavement; fireproof vault; prismatic pavement lights; metal frames and sashes; galvanized-iron skylights; wireglass; fire-escape; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevators; cost to be about \$50,000. Dowell, Helm & Co., wholesale millinery goods, temporarily located at 115 Hanover street, will occupy the building. This building previously reported.

Baltimore—Dwellings.—Charles Burdette, builder, 16 S. Monroe street, has commissioned Jacob F. Gerwig, architect, 16 Clay street, to prepare plans and specifications for 16 dwellings to be located on West Saratoga street, near Monroe. Structures to be two stories high, 15x58 feet; brick with white-marble base and trimmings; tin roofing; galvanized-iron cornices; sanitary plumbing; gas fixtures; furnace-heating system; cost to be about \$25,000.

Manufacturing Buildings and Other Enterprises.

Baltimore—Carpet-manufacturing Plant.—Schultz & Bro., carpet manufacturers, 313 West German street, has awarded contract to Thomas H. King, builder, 736 West German street, for erection of plant to be located on James street, near Carey. Structure to be two stories high, 30x140 feet; brick with stone trimmings; stone foundation; slag roofing; galvanized-iron cornice; sanitary plumbing; elevator; cost to be about \$10,000. This building previously reported.

Baltimore—Carpet-manufacturing Plant.—Schultz & Bro., carpet manufacturers, 313 West German street, have purchased lot, 60x140 feet, on James street, near Carroll Park, and will erect plant for manufacturing carpets.

Baltimore—Preserving Plant.—The National Preserving Co. has been incorporated, with a capital stock of \$50,000, to engage in the preserving business, by Henry H. Van Lill, foot of Wolfe street; Joseph H. Van Lill and Harry S. Henry.

Baltimore—Laundry.—Taylor & Walker, proprietors of the Yale Laundry, 106 West Fayette street, have awarded contract to W. E. Spier, builder, 223 North Calvert street, for construction of laundry plant to be located at Biddle and Bolton streets, after plans and specifications by W. B. Upton Company, engineer, Washington Loan & Trust Building, Washington, D. C. Structure to be two stories high, 46x32.9 feet; brick with Indiana limestone trimmings; concrete foundation; steel beams and girders; cast-iron columns; slag roofing; galvanized-iron cornice; fireproof vault; metal ceilings; electric wiring and fixtures; sanitary plumbing; steam-heating system; boilers; engines; cost to be about \$35,000. Laundering machinery will be installed. This building previously reported.

Baltimore—Paste-core Company.—The National Paste Core Compound Co. has been incorporated, with a capital stock of \$50,000, by Charles W. Shaw, Thomas E. Shaw and William J. Ogden, 102 East Lexington street.

Baltimore—Sand and Contracting Company.—The Baltimore Sand & Contracting Co. has been incorporated, with a proposed capital stock of \$12,000, to engage in general con-

tracting and furnishing building materials, by Charles Matt, 20 East Lexington street; Warren Edwards, John H. Pinning, 749 East Preston street; Ernest M. Gibbons, 18 East Lexington street, and Henry M. Rinehart, 2137 Federal street.

Sub-Bids Wanted.

Mention of contractor wanting sub-bids on construction work and material will be found in the "Machinery Wanted" column on another page under the heading of "Building Equipment and Supplies."

The Cotton Picker Co. has been incorporated under the laws of Maine, with capital stock of \$15,000,000, for the purpose of dealing in and developing machinery, and from its title evidently proposes introducing a cotton picker. Incorporators named are Messrs. George F. Gould, J. T. Fagan and T. E. Hartnett of Portland, Maine; H. B. Sawin, A. C. Leach, W. C. Cabell and W. H. Lyons of New York city. Mr. Gould is named as president and treasurer.

ALABAMA.

Bessemer—Water-works Plant.—P. Byrne, 1909½ First avenue, Birmingham, Ala., is preparing plans for the extension of the Bessemer Water-Works Co.'s plant at an estimated cost of \$60,000. There will be a power and pumping station at Hawkins Springs, two pumps having a capacity of 1,500,000 gallons each; 11,137 feet of 16-inch pipe leading to a 5,000,000-gallon reservoir 208 feet above the spring, 17,888 feet of 14-inch pipe from the reservoir to Bessemer. Extensions will also be made to the street mains and additional fire hydrants placed. Contracts will be made for the material as above designated. The company will do the construction work.

Birmingham—Barrel and Crate Factory.—The Blount County Fruit Co., W. R. Mabry, secretary and treasurer, incorporated last week with a capital stock of \$12,000, will later manufacture crates, barrels, etc.

Birmingham—Engines and Saw-mill Machinery.—The Bartlett-Tewksbury Machine Manufacturing Co. has been organized, with a capital stock of \$25,000, to manufacture engines and saw-mill machinery. Erection of plant will begin at once; T. E. E. Bartlett, president; S. F. Young, vice-president; J. W. Tewksbury, secretary and treasurer.

Lamison—Lumber Company.—O. A. Sibbey of Lamison, W. H. Frost of Fredonia, N. Y., and others have incorporated the Frost-Sibbey Lumber Co., with authorized capital of \$100,000, of which \$50,000 has been paid in, to conduct lumber business.

Mobile—Stove Works.—William Edgar, Harry Edgar, Lucy Edgar, Ernest Edgar, Arthur Jones and James Parsons, all of Mobile, and Alfred Edgar and W. H. Agar of Manchester, England, have incorporated the Stove & Pulley Manufacturing Co., with a capital stock of \$50,000, to manufacture stoves, hollowware, etc.

Montgomery—Mercantile.—John T. Echols, John T. Davis, Jr., W. H. Echols and Mrs. Lillie E. Echols have incorporated the Echols Company with a capital stock of \$10,000.

Phoenix—Girard—Stove Works.—W. E. Berry, P. O. Box 205, Phoenix, Ala., is organizing the company for the erection of stove plant to manufacture a patented stove lately mentioned.

St. Clair County—Coal Mines.—Otto Marx of Birmingham, Ala., has acquired the property of the Broken Arrow Coal Co. and will develop same, increasing the capacity from 200 tons to 500 tons.

Woodward—Coke Ovens.—Minor Bros., Birmingham, Ala., have secured contract for the construction of 300 coke ovens for the Woodward Iron Co. Mention of these ovens lately made.

ARKANSAS.

Bentonville—Brick and Tile Company.—James W. Perrin, F. M. Bates, E. S. Wilks, T. M. Wyatt and J. D. Cory have incorporated the Bentonville Brick & Tile Co. with a capital stock of \$20,000; James W. Perrin, president. Site has been secured and plant will be erected at once.

Chester—Coal and Iron Development.—J. George Brinkman, F. W. Brinkman and F. Vernon Russell of Great Bend, Kan., and J. S. Ewalt and J. J. Collins of Crawford county, Arkansas, have incorporated the Chester Coal, Coke & Development Co., with a capital stock of \$100,000, to develop iron, lead, zinc and other minerals lands.

Crawfordsville—Mercantile.—The Crawfordsville Mercantile Co. has been incorporated with a capital stock of \$25,000; C. L. Campbell, president; L. P. Berry, vice-president; E. H. Mann, secretary; Hugh Chalmers, treasurer.

Desha County—Timber Development.—The Chickasaw Cooperage Co. of Memphis, Tenn.,

recently reported as intending to erect two saw-mills for the development of 20,000 acres of timber lands, has acquired only 11,740 acres of land, and will not erect saw-mill, but will probably in the future erect a stove and heading mill.

Fort Smith—Coal Mines.—The Smokeless Coal Co. has been incorporated with a capital stock of \$100,000; John Maney, president; O. B. Kee, vice-president; Edward Henderson, secretary and treasurer.

Gillett—Telephone System.—The People's Union Telephone Co. has been incorporated with a capital stock of \$25,000; William J. Stillwell, president; J. H. Martin, vice-president; M. C. Hollis, secretary; G. F. Matt-miller, treasurer.

Jonesboro—Telephone System.—The Automatic Home Telephone Co. has been incorporated with a capital stock of \$25,000; R. L. Collins, president; F. C. Watts, vice-president; A. C. Gambill, secretary; R. L. Jones, treasurer.

Jonesboro—Lumber.—The Arkansas Stave Co. has been incorporated with a capital stock of \$25,000; W. W. Cate, president; L. M. Sedgwick, vice-president; W. S. Neeley, secretary; W. T. Lane, treasurer.

Little Rock—Iron Works.—Little Rock Boiler and Iron Works, recently reported as incorporating with a capital stock of \$5000, will erect plant 40x80 feet. J. A. Johnson, Argenta, Ark., is the builder.

Little Rock—Paper Mill.—Chicago parties are negotiating with the Board of Trade of Little Rock relative to the establishment of a paper mill.

Magnolia—Light and Ice Plant.—The Magnolia Light & Ice Co., recently reported as incorporating with an authorized capital of \$50,000, will erect and equip plant to supply 1200 incandescent lights and from 15 to 20 tons of ice. Contract has not been let.

Pointsett—Lumber.—T. J. Clark, Frank McClure, Finis P. Clark and others have incorporated the Clark & McClure Lumber Co. with a capital stock of \$5000.

FLORIDA.

Apalachicola—Steamship Company.—J. R. Saunders, H. H. Boyer, M. E. Wilson and E. R. Cobb, all of Pensacola, and L. B. Jones of Apalachicola, Fla., will incorporate the Independent Steamship Co., with a capital stock of \$25,000, to operate a steamboat line between Apalachicola, Fla., and Columbus, Ga.; J. R. Saunders, president; L. B. Jones, vice-president; M. E. Wilson, secretary and treasurer.

Dunnellon—Water-power-Electrical Plant. The Camp Phosphate Co. will construct a dam on the Withlacoochee river preparatory to the establishment of an electrical-power plant.

Jacksonville—Chemical Laboratory and Refining Plant.—Meldrum Brothers Co., recently reported as incorporated with a capital stock of \$30,000, will expend \$10,000 for the erection of laboratory in Jacksonville 100x25 feet and a refining plant in North Carolina for the manufacture of nitrates.

Jacksonville—Chemical Works.—Archibald Meldrum, M. L. Meldrum and T. S. Gray will incorporate the Meldrum Brothers Co., with a capital stock of \$20,000, to manufacture and deal in all kinds of chemicals. The officers are Archibald Meldrum, president; Robert Meldrum, first vice-president; M. L. Meldrum, second vice-president; N. P. Tut-wiler, secretary and treasurer.

Jacksonville—Road Improvement.—The county has awarded contract at \$19,550 to J. D. Smith for the construction of five miles of shell road.

Jacksonville—Tannic-acid Plant.—A. B. Adams of Manchester, N. H., is conducting negotiations for the location of a tannic-acid plant which the Forestry Chemical Co. proposes to establish at Jacksonville at a cost of about \$30,000.

Key West—Cigar Factory.—The Esberg-Gunat Company of New York city will erect cigar factory at Key West.

Pensacola—Saw-mills.—The Florida Timber Co., 401 Thiesen Building, recently reported as incorporating with a capital stock of \$100,000, will erect 10 saw-mills with a capacity of 50,000 feet per day each for sawing lumber for export and railroad and bridge timbers.

Martin—Barrel and Crate Plant.—H. B. Baxter will equip barrel and crate manufacturing plant.

Tampa—Furniture Company.—Douglas T. Elcheberger, Edwin S. Pierce and Alexander Gray have incorporated the Elcheberger & Pierce Company with a capital stock of \$15,000.

GEORGIA.

Barnesville—Cotton Mill.—J. W. Cabaniss of Atlanta, Ga., has purchased the Barnes-

ville Manufacturing Co.'s property at \$50,000 and will probably reorganize the company. Mill has 9764 spindles.

Bremen—Knitting Mill.—M. L. Brown contemplates establishing a knitting mill.*

Cordele—Cotton-ginning Plant.—W. B. Matthews will erect cotton gin to cost \$6000. It is reported that work has already begun.

Ocella—Electric-light Plant.—The town will erect electric-light plant. J. B. McCrary of Senoia, Ga., is preparing plans.

Raccoon Mills—Cotton Mill.—John D. Cleg-horn of Summerville, Ga., has purchased the Raccoon Manufacturing Co. property of 3400 spindles, 104 looms, etc., at \$50,625.

Savannah—Fertilizer Plant.—The Mutual Fertilizer Co. will erect and equip large fertilizer plant. Charles Ellis, W. F. McCauley and Charles G. Bell are stockholders of the company.

Savannah—Dredging Company.—H. P. Smart, William Kehoe, Samuel Hermann and A. F. Warner will organize a company, with a capital stock of \$50,000, for dredging purposes.

Savannah—Mercantile.—Joseph Hilton, James L. Foster and Robert H. Knox will incorporate the Savannah Mercantile Co., with a capital stock of \$5000.

Villa Rica—Knitting Mill.—W. B. Candler contemplates establishing a knitting mill.*

Willingham—Saw-mill Plant.—R. J. Corbett & Co., recently reported as intending to develop timber lands, will erect saw-mill of 50,000 feet capacity for the manufacture of yellow-pine lumber, rough and dressed. Plant will cost about \$15,000.

KENTUCKY.

Ashland—Coal and Timber Development.—American Coal & Mining Co., recently reported with a capital stock of \$1000, has organized with O. F. L. Beckett, president; S. S. Moore, vice-president; M. L. Meredith, secretary and treasurer. The company will develop coal and timber lands, and as the operations make it necessary capital stock will be increased.

Augusta—Wagon-stock Factory.—F. A. Nelder Company will erect plant for manufacturing carriage trimmings.

Glasgow—Oil Wells.—The Glasgow Oil & Well Co. has been organized to drill for oil; J. N. Smith of Glasgow, president; W. J. Deboe, Marion, Ky., vice-president and general manager; L. W. Preston of Glasgow, president and general manager.

Lexington—Power Plant.—Lexington Railway Co. will install gas plant to develop 500 horse-power and later may increase capacity to 2000 horse-power, to operate in connection with lighting plant owned by the company.

Lexington—Tobacco Dealers.—The Burley Tobacco Growers Co. has been incorporated, with a capital stock of \$500,000, to buy, sell and manufacture Burley tobacco; W. B. Hawkins of Lexington, president; John F. Ford, Georgetown, Ky., treasurer; E. F. Barton, Falmouth, Ky., secretary.

Lexington—Brick Works.—It is reported that a plant will be established to manufacture brick from dry sand and lime. J. L. Watson is interested.

Louisville—Monuments.—Joseph H. Peter, Edward F. Weinstein and Henry Almstedt have incorporated Joseph H. Peter & Co., with a capital stock of \$30,000, to make and sell monuments.

Louisville—Publishing.—Inland Farmer Publishing Co. has increased capital from \$5000 to \$8000.

Louisville—Preserving Plant.—The Goodwyn Preserving Co. will erect four-story building 56x104 feet. F. C. Goodwyn has prepared plans.

Mannington—Timber and Mineral Lands.—William Lynch of Dawson, Ky., has acquired the property of the Clifton Coal Co., and will develop about 1200 acres of coal and timber lands.

Maysville—Tobacco Warehouse.—The Maysville Warehouse Co. will erect one-story brick warehouse, 540x230 feet, at an estimated cost of \$42,000, equipping it with \$30,000 worth of machinery. The Continental Tobacco Co. was previously reported as intending to erect this plant.

Maysville—Sewerage System.—The city will vote June 28 on a proposition to issue bonds to an amount not exceeding \$12,000 for the purpose of constructing a sewerage system. Address The Mayor.

Maysville—Cotton Mill.—It is reported the Maysville Cotton Mills will make extensive improvements and install additional new machinery; it now has 4896 spindles.

Seebree—Oil Wells.—A company with J. A. Powell, president; S. A. Powell, secretary, and H. A. Couch, treasurer, has been organized to drill for oil and gas.

South Carrollton—Coal Lands.—J. H. Moore, William Moody, William Winter and others have incorporated the Moody Coal Co., with a capital stock of \$25,000, to develop coal and mineral lands in Muhlenberg county.

LOUISIANA.

Buras—Canning Plant.—The Crescent City Packing Co., B. Fastling, president, recently organized with a capital stock of \$50,000, has awarded contract to O. E. Thompson of Biloxi, Miss., for the erection of an oyster-canning plant.

Lake Charles—Gas Plant.—R. R. Bowles, 605 Majestic Building, Detroit, Mich., contemplates establishing a gas plant at Lake Charles.

Lake Providence—Water and Light Plant. The city will issue bonds to acquire water and light plant. Address The Mayor.

New Orleans—Gasholder.—The New Orleans Lighting Co. will erect iron gasholder 152 feet high and 110 feet in diameter with a capacity of 1,000,000 cubic feet. The structure will be built on the surface of the ground and supported by 600 piles; estimated cost \$50,000; previously mentioned.

New Orleans—Brazing Process.—W. A. Scott of New York and John G. Woods of New Orleans have organized the Ferrofix Brazing Co. to introduce the Fich process of brazing all kinds of metals.

New Orleans—Metallurgical Packing Plant.—Parker, Trezevant & Whyte, 205 Cotton Exchange Building, are having plans prepared for the erection and equipment of plant to manufacture the metallurgical packing referred to last week; plant cost \$10,000.

Plaquemine—Molasses Cannery.—The Stratton-Clark Company, Ltd., has been incorporated, with a capital stock of \$50,000, to can, bottle and sell syrup and molasses; L. J. Folse of Whitecastle, La., president; J. D. Clark, secretary and treasurer.

Rayville—Cotton Compress.—Charles Titche, W. T. Cook, W. J. Coleman, C. J. Ellis, H. R. Wren, J. W. Summerlin, H. W. Whitley and others will organize the Rayville Compress Co., and have awarded contract to the Webb Compress Co., Minden, La., for the erection of 2000-ton compress. Site and plant will cost about \$30,000.

MARYLAND.

Hayre de Grace—Marine Works.—C. C. Pusey, J. G. Gray and C. C. Pierce have incorporated the Susquehanna Marine Works Co., with a capital stock of \$100,000.

Lonaconing—Amusement Company.—E. Butler Carpenter, Walter B. Clark, William C. Cooley, Thomas F. Smouse and Frank A. Kuhn have incorporated the Tri-State Amusement Co., with a capital stock of \$5000.

MISSISSIPPI.

Bogue Chitto—V. V. Busby, J. R. Lee and others have incorporated as Busby, Lee & Co. with \$15,000 capital.

Brookhaven—Furniture.—Brookhaven Furniture Co. has been incorporated by W. O. Wheelock and others; capital \$10,000.

Columbus—Basket Factory.—Standard Basket Co. of Guntersville, Ala., will remove its works to Columbus and will have a daily capacity of 1200 dozen; capital \$25,000.

Columbus—Stove Works.—Standard Stove Works of Fort Payne, Ala., reported last month as contemplating the removal of its plant to Columbus, has completed arrangements. Company will incorporate with \$150,000 capital and erect five buildings, to be one story, 80x200 feet; two stories, 80x150 feet; one story, 80x150 feet; one story of iron, 40x100 feet.

Durant—Saw-mill, Shingle Mill and Bentwood Factory.—T. L. Phillips, W. J. Watson, H. C. Althoff, A. C. Wyburn, S. A. Hempy and O. A. Wright, all of Chicago, Ill., have purchased 4000 acres of timber land near Durant and will establish saw-mill, shingle mill and bentwood factory; capital \$50,000.

Grenada—Steam Laundry.—It is reported that W. H. Fletcher, Princeton, Ky., contemplates organizing company to establish steam laundry.

Grenada—Brick and Tile Works.—Bledsoe Brick & Tile Co. will install additional machinery for increasing its facilities.

Greenwood—Lumber Mill.—Chenoweth Lumber Co., recently incorporated with G. W. Chenoweth, president, and \$10,000 capital, will establish mill with a daily capacity of 20,000 feet of lumber. Machinery has been ordered.

Gulfport—Box and Crate Factory.—Peter B. Forsyth is interested in the establishment of box and crate factory reported last week to be established by Michigan parties through the efforts of J. H. Bouslog, industrial agent of the Gulf & Ship Island Rail-

road. About \$10,000 will be invested. Mr. Forsyth can be addressed care of J. H. Bouslog, Gulfport.*

Jackson—Fertilizer Factory.—Virginia-Carolina Chemical Co., Richmond, Va., has secured site on which to erect \$250,000 fertilizer factory.

Magnolia—Cotton Gin.—D. F. Vaughn is erecting cotton gin.

Terry—Water-works.—City is having plans and specifications drawn for system of water-works. Address The Mayor.

Tupelo—Laundry.—Reports state that John Allen and associates will establish a steam laundry.

Vicksburg—Real Estate.—Incorporated: Southern Land & Improvement Co., by Sam Hyman, Murray F. Smith and others, with \$100,000 capital.

West Point—Cotton Compress and Warehouse.—Planters' Compress & Bonded Warehouse Co. has been organized by B. H. Strong, W. F. Walker, J. P. Unger, W. G. White, C. B. Clisby, J. R. Brinker, H. S. Dudenhoff and associates, with \$50,000 capital, and privilege of increasing to \$100,000. Building will be erected 500x1000 feet, built in compartments of 50x100 feet, storing 1000 bales in each compartment. Machinery will also be installed for compressing cotton. Bids for construction work are invited.*

West Point—Sewerage System.—City has let contract to Sullivan & Long, Bessemer, Ala., for construction of \$50,000 sewerage system; contract for sewer pipe has been awarded to the Southern Sewer Pipe Co., Birmingham, Ala.

MISSOURI.

Joplin—Mercantile.—James A. Lelsen, A. E. Goldman, M. J. Lance and others have incorporated the Joplin Co-operative Store Co., with \$25,000 capital.

Kansas City—Cutlery.—Western Kansas Manufacturing Co., recently incorporated, with R. M. Clark, president; M. B. Freshman, vice-president and manager, and A. M. Clark, secretary-treasurer, has established plant for the manufacture of knives and forks with a daily capacity of 40 gross; capital \$20,000.

Kansas City—Real Estate.—West Eighth Street Viaduct & Improvement Co. has been incorporated, with \$10,000 capital, by F. N. Sewall, J. G. Pefferd, J. S. Loose and others.

Kirksville—Manufacturing.—Cavett Manufacturing Co. has been incorporated by W. T. Baird, T. J. Dockery, A. P. Hoppson and others with \$10,000 capital.

Sedalia—Gas and Electric Plant.—United Water, Gas & Electric Co. has incorporated, with \$1,000,000 capital; incorporators, Lewis W. Rumsey and Joseph Clark.

Springfield—Contracting Company.—C. R. Hunt, E. H. Jones and W. C. Scarritt have incorporated the Phoenix Contracting Co. with \$2500 capital.

Springfield—Association.—C. E. Fulton, J. R. Boyd, N. F. Terry and others have incorporated the Springfield Hospital Association with \$10,000 capital.

St. Joseph—Vendor Company.—Incorporated: St. Joseph Automatic Vendor Co., by John E. Webster, E. P. Snowden, O. M. Delay and others; capital \$16,000.

St. Louis—Tobacco Company.—Incorporated: St. Louis Leaf Tobacco Co., with \$20,000 capital, by Sam. Werner, Samuel Tausig, Gustav Wagner and others.

St. Louis—Pure Food.—American Pure Food Co. has been incorporated, with \$10,000 capital, to manufacture and deal in all kinds of pure foods; incorporators, Albert Acru-man, William L. Morrison, George W. Lubke, Jr., and others; office, 723 Lincoln Trust Building.

St. Louis—Horseshoe-manufacturing.—Western Horseshoe Co. has incorporated, with \$150,000 capital, to manufacture and sell patented improvement in elastic-tread horseshoes; incorporators, Lindell Gardner, James M. Hines, Sylvester P. Keyes, Robert M. Funkhouser, Robert E. Collins and E. R. Chappell.

St. Louis—Laundry.—John Krider, Leo Bonet, Charles Roberts and H. J. Fleming have incorporated the American Hotel Laundry Co., with \$5000 capital, to operate a laundry.

St. Louis—Decorative Works.—Incorporated: Arts & Crafts Shop, by Edward L. Brooks, G. T. Downing, J. H. Beckwith, W. Wetherill and M. L. Brooks; capital \$8000.

St. Louis—Roofing Material.—Walter A. Zelnicker, I. Seligstein, A. Seligstein and Louis Rosenthal have incorporated the Roofbestos Manufacturing Co., with \$3000 capital, to deal in roofing material.

St. Louis—Real Estate.—Bittner Realty Co. has been incorporated by Frank D. Bittner,

Jacob Bittner and George Ostermeyer, with \$6000 capital.

St. Louis—Manufacturing.—Convertible Cane Seat Manufacturing Co. has been incorporated by Alfred L. Eicks, W. L. Sturdevant, St. Louis; Charles B. Rogers, Hot Springs, Ark., and Charles R. Turner, Columbia, Mo., to conduct general manufacturing business; capital \$100,000.

Trenton—Water-works.—Reports state that city contemplates purchasing water-works plant from local company at \$35,000, and if plant is purchased considerable improvements will be made. H. F. Hoppman and E. M. Harber have been appointed committee to investigate.

Van Buren—Mercantile.—Van Buren Mercantile Co. has been incorporated, with \$10,000 capital, by George T. Lee, T. W. Cotton, John M. Haynes and others.

NORTH CAROLINA.

Chapel Hill—Knitting Mill.—Blanche Hosiery Mills has ordered 20 knitting machines additional; now has 20 machines.

Greensboro—Real Estate.—Garland Daniel, P. D. Gold, Jr., and Dr. J. T. J. Battle have purchased 40 acres of land at \$15,000 and will organize the Peabody Heights Co. to improve the property.

Greensboro—Mining and Manufacturing.—Appalachian Mining & Manufacturing Co. has been incorporated, with an authorized capital of \$100,000, by E. W. Lyon, S. G. Fry and O. K. McCutcheon.

High Point—Mirror Works.—Standard Mirror Co., Pittsburg, Pa., previously reported as to remove its works to High Point, has purchased site and will erect two-story building 18x200 feet.

Hillsboro—Cotton Mill.—Eno Cotton Mills will erect additional building to be equipped as a dyehouse and will install 300 looms. Contracts for construction work and machinery have been awarded.

Lenoir—Building Material, Furniture, etc.—J. M. Powell and J. R. Irwin have incorporated the Lenoir Woodworking Co., with \$20,000 capital, to manufacture building material and furniture.

Lexington—Water-works, Street Improvements, etc.—City has voted affirmatively the issuance of \$60,000 of bonds previously reported for construction of water-works and for street improvements. Address The Mayor.

Lynn—Knitting Mill.—Tryon Hosiery Co. will make improvements to its plant; now has 100 machines.

Montgomery—Tannery.—S. J. Smitherman of Troy, N. C., and J. P. Baldwin of Randolph county are constructing tannery.

Mount Airy—Lumber, Furniture and Box Manufacturing.—Chartered: Fulton Manufacturing Co., with an authorized capital of \$3000, to manufacture lumber, furniture and tobacco boxes; incorporators, J. H. Fulton, J. W. Creed and C. W. Fulton.

North Wilkesboro—Grain Milling.—Call Milling Co. has been incorporated, with an authorized capital of \$100,000, to manufacture flour, meal, bran, etc.; incorporators, Clarence Call, J. M. Turner, A. L. Combs and others.

Smithfield—Harness Oil, etc.—Incorporated: J. H. Edgerton Company, with \$10,000 capital, to manufacture the "Edgerton harness oil and leather dressing." Allen K. Smith is president; C. H. Martin, vice-president; W. A. Edgerton, secretary-treasurer, and H. Cole, manager.

Statesville—Water-works Improvements.—City has had plans prepared by W. T. McCormick, Charlotte, N. C., for improvements to water-works system. About \$5000 will be expended. Plant will have a daily capacity of 500,000 gallons; J. C. Steele, mayor.*

Washington—Cold-storage Plant.—Washington Horse Exchange Co. will erect cold-storage plant, and estimates on construction are desired; B. L. Susman, manager.

Wilson—Grocery.—S. C. Wells, J. T. McCraw and H. G. Connor, Jr., have incorporated the Wells Grocery Co., with an authorized capital of \$25,000.

Wilson—Cottonseed-oil Mill, Ginnery and Fertilizer Factory.—Farmers' Cotton Oil Co. has been reorganized, with Geo. D. Green, president; J. R. Chamberlain, vice-president and general manager; E. M. Bridgers, secretary-treasurer. Capital stock has been increased from \$23,500 to \$47,000 and a fertilizer factory will be erected and operated in connection with the cottonseed-oil mill and ginnery.

SOUTH CAROLINA.

Aiken—Ice Plant.—John Moseley, L. M. C. Oliveros and R. B. Carter will organize the Aiken Artesian Ice Co., with \$15,000 capital, to erect 15-ton ice plant.

Anderson—Cotton Mill.—It is reported that Charles O. Dexter of Hamilton, Ontario, Canada, will organize a company with capital of \$200,000 to build cotton-waste mill at Anderson.

Charleston—Telephone System.—Incorporated: Charleston & Sea Island Telephone Co., with \$15,000 capital.

Darlington—Sewerage System.—City is having preliminary surveys made by C. C. Wilson, Columbia, S. C., for the construction of sewerage system. Address The Mayor.

Kershaw—Fertilizer Factory.—Kershaw Oil Mill contemplates installing fertilizer mixer.

Prosperity—Cottonseed-oil Mill.—Prosperity Gin & Milling Co. will increase capital from \$20,000 to \$30,000.

TENNESSEE.

Chattanooga—Lock and Power Dam.—The city government has adopted a motion recommending that the city extend its credit to C. E. James and J. C. Guild to the amount of \$1,000,000 in 4 per cent. bonds to be loaned to James & Guild at 5 per cent. for the purpose of constructing the proposed lock and power dam recently mentioned. City will reserve right to purchase the plant after 50 years, and for that term is to receive electricity for 500 lamps. Congress has already provided for permitting this work in the Tennessee river 13 miles below Chattanooga.

Chattanooga—Lumber and Stone.—Berry Lumber & Stone Co. has incorporated, with \$10,000 capital; incorporators, W. M. Berry, J. M. Card, Fred Arn, F. W. Schafer and Elgin R. Thompson.

Chattanooga—Mill and Mine Supply.—Incorporated: Chattanooga Mill & Mine Supply Co., by H. E. Sanderson, T. R. Chunn, D. S. Henderson, Wallace Clift and W. B. Garvin; capital \$10,000.

Chattanooga—Planing Mill.—McLean Lumber Co., Buffalo, N. Y., which recently purchased the planing mill of the Case Lumber Co., will expend several thousand dollars in improvements, increasing the capacity, etc.

Clarksville—Manufacturing.—Business Men's Association is negotiating with New York parties relative to the establishment of manufacturing plant in Clarksville.

Coleburg—Railroad Shops, etc.—Reports state that the Nashville, Chattanooga & St. Louis Railway will remove its car shops, offices, etc., from Dickson to Coleburg; J. W. Thomas, Jr., Nashville, Tenn., general manager.

Harriman—Manufacturing.—Harriman Hoe & Tool Co. contemplates extensively improving its plant, including the installation of new machinery, etc.

Knoxville—Advertising.—A. Greenwood, J. Edward Tucker, Sr., Gerald B. Hurt, A. B. Peck and Wm. Baker have incorporated the Greenwood Advertising Co. to advertise by means of placards and billboards; capital \$10,000.

Knoxville—Coal Mines.—Incorporated: Rector Coal Co., by J. W. Cochran, T. C. Jacks, J. H. Bowling, C. A. Lamoreaux and E. E. Tennant, with \$50,000 capital.

Memphis—Cotton Cleaners.—Grab-Boll Cotton Cleaner & Machinery Co. will erect factory for manufacturing a device to separate cotton and loose seed from oil-mill screenings. J. H. Draughon is president of company; E. J. Gardner, vice-president; U. S. Hart, secretary, and J. W. Draughon, treasurer; office, Room 29, Cotton Exchange Building.

Memphis—Cottonseed-oil Mill.—Phoenix Cotton Oil Co. has increased capital from \$100,000 to \$200,000.

Memphis—Real Estate.—Frank M. Avery, W. R. Johnston, John L. Norton, G. M. Beattie and J. P. Edrington have incorporated the Memphis Land & Building Co. with \$100,000 capital.

Memphis—Printing.—Holland Printing Co. has amended charter, changing name to Chickasaw Printing Co. and increasing capital from \$1000 to \$3000.

Memphis—Handle Factory.—Turner, Day & Woolworth Handle Co. of Louisville, Ky., has secured site on which to erect handle factory.

Nashville—Educational.—Incorporated: Draughon's Practical Business College, with \$50,000 capital, by J. F. Draughon, E. A. Glover, C. T. Matthews and others.

Nashville—Knitting Mill.—Nashville Hosiery Mills has purchased the Limestone Hosiery Co.'s mill at Athens, Ala., and will remove the machinery to Nashville.

TEXAS.

Austin—Umbrella Factory.—N. W. Fink of St. Louis, Mo., will establish plant for the manufacture of umbrellas; office, 314 E. 6th street, Austin.

Bay City—Telephone System.—Bay City & Matagorda Telephone Co. has been incorporated, with \$5000 capital, by W. W. Boulden, R. H. Traylor, Bay City, and A. W. McNabb, Matagorda, Texas.

Beaumont—Real Estate.—James H. Rachford, Beaumont; R. E. Rachford, Port Neches, Texas, and John W. Dearing, Glasgow, Ky., have incorporated the Dearing Land & Loan Co., with \$50,000 capital.

Beaumont—Oil Wells.—Incorporated: Batson Company, with \$60,000 capital, to operate in the Texas fields, by James L. Autry, Fred W. Freeman and W. B. Sharp.

Beaumont—Oil Wells.—F. J. Alderson, R. C. Duff, Beaumont, and James C. Jones of Batson, Texas, have incorporated the Clara Oil Co. with \$50,000 capital.

Beeville—Steam Laundry.—A. A. Pearce contemplates establishing modern steam laundry.

Brownsville—Construction Company.—Union Construction Co. has been organized to do a general contracting business. A. Curry is secretary, and F. J. Sargent is manager.

Brownsville—Irrigation Plant, etc.—Lon C. Hill and associates, owning 40,000 acres of land near Brownsville, will erect irrigation plant of two 36-inch pumps with a capacity of 100,000 gallons and improve the land as townsites.

Canadian—Mercantile.—Gerlach Mercantile Co. has been incorporated, with \$35,000 capital, by George, John and Capitola Gerlach.

Dallas—Expositions.—Chas. A. Mangold, C. A. Keating, Alex. Sanger, Royal A. Ferris, James Moroney and associates have incorporated the State Fair of Texas, with \$100,000 capital, to maintain public expositions.

El Paso—Water works.—Reports state that Pennsylvania capitalists have formed a company with \$2,000,000 capital to furnish El Paso with water by means of a pipe line from Mimbres, N. M. J. S. Delamater of Pittsburgh, Pa., is local representative, and R. C. Kennedy is chief engineer; offices in the Buckler Building.

Houston—Hide and Wool Factory.—John Finnigan Company has increased capital from \$150,000 to \$250,000.

Houston—Manufacturing.—Lottman-Myers Manufacturing Co. has been incorporated, with W. S. Myers, Dallas, Texas, president, and A. C. Lottman, Houston, vice-president and general manager, to take over the business of A. C. Lottman, and has also purchased the plant of the Lottman Bros. Company. Company will manufacture spring beds, cots, mattresses, pillows, lawn swings, deal in household goods, etc.; capital \$100,000. New buildings will be erected.

Houston—Pencil Factory.—W. G. Liggett Company, reported incorporated last month with \$10,000 capital, will establish plant to manufacture the small blocks which carry the lead in all sorts of pencils.

Houston Heights—Cottonseed-oil Mill.—Roberts Cotton Oil Co. has purchased the cottonseed-oil mill of the Houston Oil Co. Extensive improvements will be made and new machinery installed for doubling the capacity.

Justin—Mill and Elevator.—W. H. Pennington, W. E. Smook, J. C. Heath, G. Gibbs, R. R. Litsey and others have incorporated the Citizens' Mill & Elevator Co., with \$30,000 capital.

Liberty—Oil Wells.—Incorporated: Alice Glover Oil Co., by C. F. Stevens, W. C. Moore, H. C. Briggs and others, with \$5000 capital.

Mansfield—Telephone System.—Mansfield Telephone Co. has increased capital from \$6000 to \$5000.

Marshall—Storage Company.—Marshall Warehouse & Storage Co. has been incorporated by John R. Mahone, E. W. Mahone, L. H. Henley and M. J. Henley; capital \$5000.

Nacogdoches—Cigar Factory.—Business League is in receipt of a proposition from the Taylor-Webb Company relative to the establishment of cigar factory and tobacco warehouse.

Paris—Cotton Mill.—Arrangements are being completed for the erection and equipment of the 20,000-spindle cotton mill previously reported as to be established by W. I. Young of Greensboro, N. C., and associates.

Port Arthur—Oil Refinery.—Texas Co. has let contract to the Petroleum Ironworks Co. for the installation of additional stills and agitators previously reported.

Princeton—Cottonseed-oil Mill and Gin.—Alma Wilson, W. A. Burton and John K. Wilson have incorporated the Princeton Mill & Gin Co. with \$20,000 capital.

San Antonio—Mercantile.—Saul, Abe and Emil Wolfson have incorporated the Saul Wolfson Dry Goods Co. with \$100,000 capital.

San Antonio—Drugs.—Park Laboratory Co.

of New York has been incorporated by Albert Krouksky, W. Ochse and James Harper, with \$2500 capital, to manufacture drugs, chemicals, etc.

VIRGINIA.

Gate City—Water-power-Electric Plant, etc. Holston Springs Industrial Co. has been incorporated by A. R. Ayers and others to take over and develop the Holston Springs property. Company will develop the water-power of Horseshoe bend, transmit power by electricity, establish cannery, etc.

Leesburg—Water-works.—City will vote July 9 on the issuance of \$30,000 of bonds for the construction of system of water-works; S. Carroll Chancellor, mayor.

Norfolk—Cold-storage Plant.—Armour & Co., Chicago, Ill., have made application to the city for franchise to construct and operate a cold-storage and refrigerating plant.

Norfolk—Warehouses, Piers, etc.—Atlantic Coast Line Railroad is extending piers and warehouses at Pinner's Point; J. R. Kenly, general manager, Wilmington, N. C.

Norfolk—Machinery and Supplies.—Lumley-Dodson Company has purchased and will continue to operate with increased facilities the mill, steamboat and railroad supply business and the general machinery construction and repair business of E. J. Griffith & Co. G. Frank Beach is president of the Lumley-Dodson Company; R. A. Dodson, vice-president; E. J. Griffith, secretary; H. C. Dodson, treasurer, and W. F. Lumley, general manager.

Norfolk—Cutlery.—Chartered: Rogers Cutlery Co., with an authorized capital of \$100,000, and W. H. Rogers, president.

Petersburg—Vehicle Works.—Davis Carriage Manufacturing Co. has been incorporated, with T. J. Davis, president, and James M. Tallafiero, secretary-treasurer; capital \$25,000.

Portsmouth—Gas Plant Improvements.—Portsmouth Gas Co. contemplates enlarging its plant at a cost of \$15,000.

WEST VIRGINIA.

Bluefield—Coal Mines.—H. Lyon Smith of New York has purchased the mining property of the Swords Creek Co. and has organized the Continental Coal Co. to operate the mine. Extensive improvements will be made and new and improved mining machinery installed.

Bluefield—Coke Ovens.—United States Coal & Coke Co. has let contract for the erection of 300 coke ovens to cost about \$300,000.

Braxton County—Coal Mines.—Cosmopolitan Coal & Coke Co., reported incorporated last week with \$1,000,000 capital, will mine coal in Braxton county. No contracts have been let; offices, Pittsburgh street, Connellsville, Pa.; 607 Park Building, Pittsburgh, Pa., or Lock Box 491, Uniontown, Pa.

Charleston—Mine Doors.—Electric Mine Door Co., recently organized by John T. Devise and others, will establish plant to manufacture and install mine doors. Machinery has been ordered.

Clarksburg—Grocery.—Pugh Grocery Co. has been incorporated, with an authorized capital of \$100,000, by John A. Crislip, Frank Armstrong, Clarksburg, W. Va.; James Pugh, Morgantown, W. Va., and Wm. Beavers, Terra Alta, W. Va.

Glendale—Water-works.—Clark Water Co. has been incorporated for the erection of system of water supply by Frank Hetzer and Mentor Hetzer of Moundsville, W. Va.; T. Lee Clark, A. H. Trimble and Joseph Hastings, Allegheny, Pa.; capital \$25,000.

Marlinton—Light and Water Company.—Marlinton Light & Water Co. has been incorporated with \$10,000 capital.

Paden City—Steel Plant.—Ohio Valley Steel Foundry Co. of Pittsburgh, Pa., will issue receivers' certificates to the amount of \$50,000 for resuming the construction of its steel plant. Details of this enterprise were fully reported last July.

Pennsboro—Oil and Gas Wells.—Pennsboro Oil & Gas Co. has been incorporated, with an authorized capital of \$25,000, by H. H. Broadwater and others.

Richwood—Cemetery Association.—Richwood Cemetery Association has been incorporated, with an authorized capital of \$10,000, by Richard N. Dyer and others.

Wellsburg—Glass Works.—James Frank, T. S. Chapman, F. A. Chapman and others have incorporated the Wellsburg Glass & Manufacturing Co. to manufacture glass.

INDIAN TERRITORY.

Muskogee—Artificial Stone.—Muskogee Hydraulic Stone Manufacturing Co. has been incorporated with \$15,000 capital. J. O. Callahan is president; A. E. Bonnell, vice-president; B. G. Slaughter, secretary, and D. H. Middleton, treasurer.

Muskogee—Oil Refinery.—It is reported that the Hutton-Hopkins Company will erect oil refinery.

Sapulpa—Sewerage System.—It is reported that J. T. Gillitz is interested in the construction of sewerage system.

Saratoga, Texas.—Saratoga Lumber Co.'s plant; loss \$20,000.

Wetumka—Mining, etc.—Chartered: Wetumka Oil, Mining & Development Co., with \$250,000 capital.

OKLAHOMA TERRITORY.

Craft—Oil, Mining and Manufacturing.—J. C. Wright and O. E. Null of Grand, O. T.; Reinhart Mier and Charles Swindell of Woodward, O. T., have incorporated the Schultz Oil, Mining & Manufacturing Co. with \$35,000 capital.

Deer Creek—Telegraph Company.—Incorporated: Deer Creek Mutual Telegraph Co., with \$50,000 capital, by J. W. Grigsby, Charles Peterson, I. M. Nelson of Independence, O. T., and others.

Guthrie—Paper Factory.—Commercial Club has concluded negotiations with R. S. Fraum of Illinois for the establishment of a paper factory.

Hobart—Drugs.—Palace Drug Co. has been incorporated by Fred E. Nichols of Hobart, Frank O. and O. Nichols of Weatherford, O. T., with \$50,000 capital.

Hominy—Lumber.—Incorporated: Fred Michaelis Lumber Co. of Hominy and Bartlesville, I. T., by Fred Michaelis and Fred P. Spraul of Bartlesville, I. T., and Eugene F. Blaise of Perry, O. T.; capital \$10,000.

Leger—Cottonseed-oil Mill.—Versaw & Hayes of Oklahoma City, O. T., have contract at \$6000 for the erection of the Altus oil mill; structure to be two stories, of brick, 40x200 feet, seedhouse 36x275 feet.

Mangum—Grocery.—L. A. Snow, W. H. and R. H. Jacobs have incorporated the Snow Grocery Co., with \$10,000 capital.

Okeene—Mercantile.—E. R. Black, Ida R. Black and Lillie E. Heisington have incorporated the Racket Store, with \$10,000 capital.

Oklahoma City—Gold-mining.—Chartered: Indian Train Gold Mining Co., with \$1,000,000 capital, by W. P. Conger, Warren K. Snyder, F. L. Conger, T. A. Blaise, J. H. McCartney and others.

Shawnee—Iron-bed Factory.—D. H. and M. E. Hallowell and H. T. Douglas have incorporated the Shawnee Brass & Iron Bed Manufacturing Co., with \$100,000 capital.

Shawnee—Cotton Gin.—W. H. Beatty, W. S. Baker and T. F. Stubbs have incorporated the Independent Gin Co. with \$5000 capital.

Shawnee—Development Company.—Oklahoma Oil, Refining & Development Co., with \$2,000,000 capital, by George E. Estis, W. J. Estis and B. B. Blakeney, Shawnee, B. E. Joseph and James Wilson, Chicago, Ill., and A. Booth of Ashton, Ill.

Stillwater—Oil and Mining Company.—Eastern Oklahoma Oil & Mining Co. has increased capital from \$150,000 to \$600,000.

BURNED.

Bryan, Texas.—Mrs. Lillie L. Chance's cotton gin; loss \$3000.

Fort Smith, Ark.—Ward Furniture Factory's warehouse; loss \$5000.

Hardinsburg, Ky.—Oelze & Pate's flour mill; loss \$7000.

Kilgore, Texas.—J. T. Butts' cotton gin; loss \$3000.

Randleman, N. C.—A. N. Routh's grist mill; loss \$3000.

Richmond, Va.—John W. Atkinson's paint and oil house; loss \$10,000.

Warrensburg, Mo.—Clark's lumber-yard; loss \$150,000.

Whitecastle, La.—Cypress Shingle Co.'s saw-mill; loss \$5000.

BUILDING NOTES.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Aberdeen, Miss.—Jail.—Board of Supervisors of Monroe county will open bids August 1 at the county courthouse for the erection of jail building in accordance with plans and specifications on file at office of C. P. Smith, clerk, and copies may be obtained upon application to Andrew J. Bryan, architect, 905 Hennen Building, New Orleans, La. Certified check for \$1000, payable to president of board, must accompany each bid. All bids must be made on forms furnished by architect. Board reserves usual rights.

Ackerman, Miss.—School.—City contemplates erecting \$12,000 school building. Address The Mayor.

Asheville, N. C.—Depot.—Southern Railway has had plans prepared by Architect Elvin, Columbia, S. C., for the erection of passenger station previously reported; C. H. Ackert, general manager, Washington, D. C.

Augusta, Ga.—Church.—Kollock Street Baptist Church, O. P. Gilbert, pastor, will erect building to cost between \$20,000 and \$30,000.

Baton Rouge, La.—School.—W. H. Bynum, mayor, Baton Rouge, La., will open bids July 12 for the erection of school building in accordance with plans and specifications on file in office of City Clerk, Baton Rouge; also at office of Andrew J. Bryan, architect, 905-907 Hennen Building, New Orleans, La. Certified check for \$500 must accompany each bid. All bids must be made out on proposal sheets furnished by architect; other forms of bids will not be considered. Contractors can secure plans by depositing \$50 with architect. Usual rights reserved.

Baton Rouge, La.—Depot.—It is reported that the Yazoo & Mississippi Valley Railroad will erect \$30,000 depot. Address H. W. Parkhurst, Chicago, Ill.

Beaumont, Texas.—Market-house.—William Weber has contract to erect proposed \$10,000 brick market building.

Bennettsville, S. C.—Hotel.—A. J. Matheson has purchased site at \$10,000 on which to erect 50-room hotel.

Bessemer, Ala.—Hall.—The Odd Fellows and Knights of Pythias will erect three-story hall at a cost of \$10,000.

Birmingham, Ala.—Business Building.—George P. Harrison of Opelika, Ala., previously reported as preparing to erect five-story building at a cost of \$20,000, has let contract to A. J. Krebs & Co.

Birmingham, Ala.—Brick Building.—Joseph R. Smith will erect three-story brick building to cost \$6500.

Blakeley, Ga.—Courthouse.—The County Commissioners will meet on June 14 to select plans and specifications by competition from architects for courthouse for Early county. The building is to be fireproof and to cost about \$10,000. Address J. L. Freeman, Commissioner.

Cambridge, Md.—School Improvements.—Cambridge Seminary will be remodeled and improved at a cost of about \$12,000. Address The President.

Charleston, S. C.—Workshop.—Simons, Mayrant & Co. have contract at \$14,873 for the construction of workshop at the Charleston navy-yard.

Charlotte, N. C.—Store Building.—John M. Scott & Co. are having plans prepared for the erection of store building to cost about \$20,000.

Charlotte, N. C.—Buildings.—Hook & Sawyer have completed plans for three additional buildings at county home; to be one story, of brick.

Chestertown, Md.—School Improvement.—Washington College is contemplating expending \$30,000 on improvements. Address The President.

Columbia, S. C.—Hospital.—Columbia Hospital contemplates the erection of an addition.

Columbia, S. C.—Building.—James Wilson, Secretary United States Department of Agriculture, Washington, D. C., will open bids June 28 for the erection of two-story brick building for the weather bureau, United States Department of Agriculture, Columbia, in accordance with plans and specifications which may be obtained at the weather bureau office, Columbia, and at office of chief of the weather bureau, Washington, D. C. Department reserves usual rights.

Columbia, Tenn.—Courthouse.—R. Hugger & Bro., Montgomery, Ala., have contract at \$83,000 for erecting Maury county courthouse, previously reported.

Durham, N. C.—College Improvements.—Trustees of Trinity College contemplate the erection of annex to cost \$150,000.

Elizabeth City, N. C.—Hotel Improvements.—E. F. Aydtett is having plans prepared by Ferguson & Calrow for remodeling the Albemarle House at a cost of about \$15,000.

Ellicott City, Md.—Slaughter-house, Ice-house and Stable.—Charles W. Frenth has awarded contract to Jacob Kirn for the re-erection of slaughter-house, icehouse and stable recently destroyed by fire.

Fayetteville, Ark.—Hall and Opera-House.—The Knights of Pythias Hall & Opera-House Co. has been incorporated, with a capital stock of \$25,000, to build and operate hall and opera-house; E. B. Harrison, president; W. W. Chapman, vice-president; W. S. Pollard, secretary; F. P. Hull, treasurer.

Florence, Ala.—City Hall.—The city has let contract to Temple & McGucken for the erection of City Hall.

Forest City, N. C.—Bank Building.—A new

bank, organized with G. E. Young, president, will erect bank building.

Frankfort, Ky. — Capitol Building. — The State Capitol Commission has authorized Frank Mills Andrews, Dayton, Ohio, to prepare plans for the proposed capitol building previously mentioned, for which \$1,000,000 is available. It is estimated that plans will be ready by September 20.

Front Royal, Va. — Church. — Methodist congregation contemplates erecting \$10,000 edifice. Address The Pastor.

Gibsonville, N. C. — Residence. — Clarence N. Cone has let contract to J. C. Morris of Greensboro, N. C., for the erection of his proposed \$5500 residence.

Greensboro, N. C. — Library. — Site has been secured for proposed \$30,000 Carnegie Library. Address The Mayor.

Grenada, Miss. — Church. — Presbyterian congregation has let contract to Irby & Whitaker at \$13,260 for the erection of edifice previously reported.

Greenville, Miss. — School. — City has voted affirmatively the issuance of \$30,000 of bonds for the erection of school buildings previously reported. Address The Mayor.

Greenville, S. C. — College Building. — Board of Trustees of Greenville Female College contemplates erecting \$12,000 building. Address Rev. J. I. Allen.

Greenwood, Miss. — Courthouse. — Leflore county contemplates the erection of courthouse. Address County Clerk.

Hagerstown, Md. — Jail. — The County Commissioners have awarded contract at \$38,182 to the Pauly Jail Building Co. of St. Louis, Mo., for remodeling jail. It will be equipped with 42 cells, 5x7 feet, constructed of tool-proof material. Recently mentioned.

Hamburg, Ark. — Courthouse. — T. M. Hooker, chairman Building Commission, will receive bids up to July 15 for the erection of two-story brick courthouse. Plans and specifications at office of Mr. Hooker at Hamburg, and of Frank W. Gibb, architect, Little Rock, Ark.

Hendersonville, N. C. — Courthouse. — W. F. Edwards has contract at \$33,478 for the erection of Henderson county's courthouse previously reported.

Hopkinsville, Ky. — Association Building. — The Y. M. C. A. will erect building to cost \$15,000. Mr. Johnson, representing State committee Y. M. C. A., Lexington, Ky., can give information.

Huntington, W. Va. — Business Block. — Dan A. Mossman and Mike Broh will erect business block of pressed brick and structural iron.

Huntington, W. Va. — Hospital. — Dr. A. K. Kessler will erect stone hospital to cost \$50,000.

Jackson, Miss. — School. — City contemplates erecting school building. Address The Mayor.

Jackson, Miss. — Bank and Office Building. — Merchants' Bank has had plans prepared by R. H. Hunt, Chattanooga, Tenn., for the erection of five-story bank and office building.

Keyser, W. Va. — Dwelling. — H. G. Buston has let contract to W. A. Liller for the erection of his proposed \$30,000 residence.

Keyser, W. Va. — School. — City has awarded contract to C. W. Shelley for the erection of school building previously reported.

Laurel, Miss. — Sanitarium. — Dr. F. E. Lee, Aberdeen, Miss., contemplates organizing \$5000 stock company to establish sanitarium.

Lexington, Ky. — Storage-house. — Martin Geertz, architect, 25 North Mill street, Lexington, Ky., will receive bids until July 1 for the erection of storage-house for the Eastern Kentucky Lunatic Asylum; A. M. Harrison, chairman building committee.

Lexington, Miss. — Jail. — Board of Supervisors of Holmes county will open bids July 4 for the erection of three-story fireproof jail, 36x42 feet, to cost \$10,000, after plans by W. S. Hall, Jackson, Miss., and which are on file at office of Parham Williams, clerk, Lexington.

Louisville, Ky. — Business Buildings. — Trevor H. Wayne has commissioned Clark & Loomis to draw plans for the remodeling of two and the erection of three three-story buildings on Jefferson street. Between \$20,000 and \$25,000 will be expended on the improvements.

Louisville, Ky. — Library. — The Presbyterian Theological Seminary has had plans prepared for library building.

Louisville, Ky. — Depot. — D. X. & J. C. Murphy are preparing plans for the erection of three-story building for the Louisville & Interurban Railway Co., to cost from \$50,000 to \$75,000, lately mentioned.

Lynchburg, Va. — Business Building. — C. W. Hancock & Sons are lowest bidders at \$38,880

for six-story and \$44,000 seven-story building to be erected by P. A. Krise.

Macon, Ga. — Fair Building. — R. H. Smalling has secured contract for the erection of State fair building at \$14,979.99.

Macon, Ga. — Store and Office Building. — Denny & Ellis have prepared plans for J. H. Napier for a three-story building to be constructed of pressed brick with brownstone trimmings and to have hot-water-heating equipment; first floor will be used as stores, and second and third to be used as offices and bachelor apartments, respectively.

Marlin, Texas. — Opera-house. — Marcus Levy, Beaumont, Texas, has made a proposition to the city to erect \$10,000 brick opera-house.

Memphis, Tenn. — Hotel. — Philip Fransoli, proprietor Fransoli Hotel, has had plans prepared by Chigzola & Hanker for the erection of hotel 22x150 feet, to cost \$20,000.

Memphis, Tenn. — Warehouse. — Chickasaw Coopersage Co. is having plans prepared by Walk C. Jones for the erection of warehouse 80x150 feet.

Montgomery, Ala. — Hotel. — The Montgomery Hotel Co., Simon Gassenheimer, president, recently reported as incorporating with a capital stock of \$175,000 for the purpose of building hotel, will erect seven-story structure of gray-pressed brick, terra-cotta finish and structural work of steel. It will be fire-proof, containing 184 bedrooms, 100 of which will be provided with baths.

Nashville, Tenn. — Residence. — W. G. Simmons will erect \$6000 residence.

New Roads, La. — Church. — The Catholic Congregation, Father Francis Laroche, pastor, recently reported as intending to open bids June 20 for the erection of church building, will have a brick structure of Gothic architecture 130x50 feet, to cost \$25,000; Theodore Brune, 319 Carondelet street, New Orleans, La., architect in charge.

Oklahoma City, O. T. — Hospital Addition. — A \$25,000 addition will be built to St. Anthony's Hospital.

Opelika, Ala. — Dwelling. — G. N. Hudman has let contract for the erection of eight-room two-story building; frame and slate construction and to have electric-lighting equipment, to cost \$12,000.

Palestine, Texas. — College Buildings. — Northeastern Christian Convention has purchased site on which to erect \$5000 building for an industrial school and college.

Pascagoula, Miss. — School. — City has let contract to W. H. Strong, Brewton, Ala., for the erection of its proposed \$15,000 school building.

Pensacola, Fla. — School Building. — The County Board of Public Instruction will erect school building to cost about \$9000, including site.

Pine Bluff, Ark. — Brick Building. — The Southern Mercantile Co., Ferd Havis, president and manager, will erect two-story brick building at a cost of \$14,000.

Pine Bluff, Ark. — Storehouse. — The Anheuser-Busch Company, Jeff Hicks, local agent, will erect brick building 45x75 feet at a cost of about \$9000, to be used as a storehouse and distributing station.

Portsmouth, Va. — Storehouse. — Pittsburg Construction & Engineering Co., Pittsburg, Pa., has contract at \$35,000 for the erection of two-story steel and brick building 50x150 feet at navy-yard, to be used as storehouse for canvas and chain.

Prescott, Ark. — Jail. — J. M. Brown of Texarkana has secured the contract at \$7000 for the erection of jail building for Nevada county.

Richmond, Va. — Stable. — Board of Health, Richmond, Va., will open bids June 16 for building brick stable. Certified check for \$250 must accompany each bid. Full information on application to Board of Health. Usual rights reserved.

Roanoke, Va. — Depot. — Norfolk & Western Railroad Co. has had plans prepared by Frye & Chesterman, Lynchburg, Va., for proposed \$100,000 depot; L. E. Johnson, Roanoke, Va., president.

Rockville, Md. — Bank Building. — The Montgomery County National Bank, Spencer C. Jones, president, will erect three-story building to cost \$18,000.

Rusk, Texas. — School. — City will vote July 8 on the issuance of \$14,000 of bonds for the erection of school building. Address The Mayor.

Salisbury, N. C. — Theater. — Dr. Leroy Meroney, Philadelphia, Pa., is having plans prepared by Hook & Sawyer, Charlotte, N. C., for the erection of proposed \$35,000 theater.

Sapulpa, I. T. — Hotel. — Acme Hotel Co. of St. Louis, Mo., contemplates erecting \$25,000 hotel.

Scottsville, Va. — School. — Bids will be received until July 6 at office of S. W. Lyon

for erecting brick school building. Plans and specifications may be had from R. L. Parker, 701 Crawford street, Portsmouth, Va.

Southport, N. C. — School. — City has had plans prepared for the erection of school building. Address The Mayor.

Spartanburg, S. C. — Depot. — Southern Railway has let contract to H. C. Morrison, Augusta, Ga., for the erection of its proposed passenger depot; C. H. Ackert, general manager, Washington, D. C.

Staunton, Va. — Opera-house. — City will vote June 14 on the issuance of \$10,000 of bonds for improving opera-house. Address The Mayor.

St. Joseph, Mo. — Postoffice. — James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids July 14 for the construction, including plumbing, heating apparatus, electric wiring and conduits, of the United States postoffice extension at St. Joseph, in accordance with drawings and specifications, copies of which may be had at office of supervising architect or at office of the custodian, St. Joseph, Mo., at the discretion of the supervising architect.

St. Louis, Mo. — Hotel. — Fred B. Weeks, John H. Wolf and James D. Simms have incorporated the Hotel Cecil Co., with \$25,000 capital, to erect and operate hotels.

St. Louis, Mo. — Sanitariums, Hospitals, etc. — Paquin's Immune & Hotel Co. has been incorporated by Crawford H. Duncan, William Everett, Mary H. Langan and Jennie F. Paquin to operate sanitariums, hospitals, etc.; capital \$25,000.

Summersville, W. Va. — Bank Building. — Nicholas County Bank, John A. Hoff, president, will erect bank building.

Thomaston, Ga. — Building. — Pruitt & Murray, recently reported as intending to erect building, will have structure 30x30 feet at the bottom and 55x30 feet at the top; to cost about \$7000. P. E. Dennis, Macon, Ga., architect in charge.

Towson, Md. — Dwelling. — Dr. R. C. Massenburg will erect three-story frame building, 32x42 feet, equipped with hot-water heating and electric-lighting fixtures; Charles E. Cassell, 411 N. Charles street, Baltimore, Md., architect; M. H. Merryman of Towson, contractor.

Valden, Miss. — Courthouse. — Board of Supervisors of Carroll county is having plans and specifications prepared by P. H. Weathers for courthouse previously reported to be erected at a cost of \$25,000.

Waco, Texas. — Church. — Fifth Street Methodist Church will remodel edifice at a cost of \$8000. Address The Pastor.

Washington, D. C. — Municipal Building. — A. B. Stanard, New York, has contract at \$189,880.50 for making excavation and laying foundations for proposed municipal building.

Washington, D. C. — Bakery. — Havener Baking Co. has let contract to James L. Parsons for the erection of addition to bakery.

Waxhaw, N. C. — Store Building. — Dr. W. B. and J. E. McCain have purchased site on which to erect store building.

Weish, La. — School Building. — The city will erect eight-room school building to cost \$8000; Burt McDonald, Orange, Texas, architect.

West Point, Miss. — Warehouse. — Planters' Compress & Bonded Warehouse Co. will erect warehouse, 500x1000 feet, built in compartments of 50x100 feet, storing 1000 bales in each compartment. Bids for construction are wanted.

Williamsport, Md. — Postoffice and Hall. — G. W. Hurd will erect brick structure, lower part of which will be used as the postoffice and the upper floor as a hall.

Winona, Miss. — Courthouse. — Bruce Architectural Co., Birmingham, Ala., will prepare plans for Montgomery county's proposed \$35,000 courthouse. Address County Clerk.

Winston-Salem, N. C. — Library. — Edward Tilton of New York has prepared plans for proposed Carnegie Library building; structure to be two stories, of brick, 60x55 feet, with red-tile roof.

Yazoo City, Miss. — Building. — Hull & Watson of Jackson, Miss., have contract to erect two-story brick building for E. Luke.

Yazoo City, Miss. — Clubhouse. — Calumet Club will have plans prepared for the erection of clubhouse.

RAILROAD CONSTRUCTION.

Railways.

Aberdeen, N. C. — Mr. John Blue, president of the Aberdeen & Rockfish Railroad, writes the Manufacturers' Record that the company is building a seven-mile extension to Hope Mills, connecting there with the Atlantic Coast Line. Two miles of track laid and three miles graded. Expected to complete extension by middle of July or August 1.

Chicago, Ill. — A rumor from Texas says that the Chicago, Rock Island & Pacific Rail-

way is considering plans to build its long-projected extension from Dallas to Galveston, 300 miles. W. L. Darling is chief engineer. S. B. Hovey, vice-president of the Rock Island lines in Texas, is reported as denying that the matter of building to the Gulf is now under consideration.

Baltimore, Md. — C. H. Classen has applied to the city council for a franchise to build a switch and siding from the Northern Central Railway to his property on Central avenue.

Beaumont, Texas. — The Beaumont, Sour Lake & Western Railroad has completed its track across the Pine Island bayou bridge, and is expected to reach Sour Lake within a few days. The company was formerly known as the Beaumont, Sour Lake & Port Arthur Traction Co. The stockholders have authorized the amendment of the charter so as to extend the line from Sour Lake via Batson to Houston. The officers are: G. W. Meeker, president; William Weiss, first vice-president; Emory J. Smith of Columbus, Ohio, second vice-president; Hugh A. Smith, traffic manager and general passenger agent; Geo. W. White, chief engineer. The directors are: G. W. Meeker, T. S. Reed, B. R. Norvell, William Weiss, R. C. Duff, H. E. Smith, J. M. Richards, W. A. Smith and E. J. Smith, all but the last four names hailing from Beaumont.

Bluefield, W. Va. — William Rossi is reported to have been awarded a five-mile grading contract on the Deepwater Railroad.

Burgaw, N. C. — The Burgaw Manufacturing Co. is reported to be clearing right of way for a tramroad and to have bought rails. It is rumored that the line may be extended to the river.

Chicago, Ill. — Reported that the Chicago, Rock Island & Pacific Railway will extend its line from Ardmore, I. T., to Waurika. W. L. Darling is chief engineer.

Cincinnati, Ohio. — Mr. G. B. Nicholson, chief engineer of the Cincinnati, New Orleans & Texas Pacific Railway (Queen & Crescent Route), writes the Manufacturers' Record that the erection work is just being started on the viaduct approach to Cumberland river bridge, 740 feet long, and the New river 200-foot span, with viaduct approaches of a total length of 1320 feet. The American Bridge Co. has been awarded the contract to rebuild the Fishing creek viaduct, 570 feet long, and that over the south fork of Green river, 1200 feet long.

Conway, S. C. — Mr. F. A. Burroughs informs the Manufacturers' Record that at present there is nothing positive about any proposition to build a railway from Conway to Marion.

Dallas, Texas. — Reported that rights of way are being obtained for an extension of the Texas & Pacific Railway from Whitesboro to Gainesville. B. S. Wathen is chief engineer.

Dallas, Texas. — Reported that the Dallas & Eastern Texas Traction Co. will soon apply for a charter to build an interurban electric railway connecting Dallas, Mesquite, Forney, Terrell, Elmo and Wills Point, 47 miles. Among those interested are T. L. Marsalis of Dallas and New York city, W. B. Greenlaw of Dallas, R. S. Kimbrough of Mesquite and Colonel Marshall of Wills Point. Mr. Kimbrough is reported as saying that very little has been done in the premises, and that he has not conferred with Messrs. Marsalis and Greenlaw.

Dublin, Ga. — The Dublin & Southwestern Railroad is reported completed to Rentzville, 12 miles, where the plant of the Rents Lumber Co. is situated. The line is projected to continue to Eastman and Abbeville, but it is now reported that it may be diverted to McIntosh.

Enid, O. T. — Announcement reported that the company will begin work immediately on an extension of the Denver, Enid & Gulf Railroad from Enid northward to connect with the Union Pacific possibly at Hays. Kan. E. L. Peckham is vice-president and general manager.

Fort Worth, Texas. — Col. Morgan Jones, president of the Wichita Valley Railway, which has recently completed and put in operation an extension from Seymour to Byers, is reported as saying that the line will be extended still farther north. This will carry the line into Oklahoma. W. E. Kaufman is secretary and treasurer.

Guthrie, O. T. — The Guthrie, Fairview & Western Construction Co. is reported chartered in Oklahoma to build the proposed railroad of the same name from Guthrie to Fairview. W. S. McCaul of Joliet, Ill., and others are interested.

Houston, Texas. — The Galveston, Houston & Northern Railway (Southern Pacific system) is relaying its line with 85-pound rails, replacing 60-pound rails. Six miles of line

have been converted and two miles per day. It is reported, are being changed. The line is also being rebalanced with gravel.

Iola, N. C.—Capt. Milton Jones is reported to be building a railroad from Thomasville to the Narrows, grading being under way. An extension to High Point is said to be under consideration.

Jerico, Mo.—The Jerico & Southwestern Railroad is reported incorporated to build from Jerico southwest, 20 miles, to connect with the Missouri Pacific. The officers are: C. E. Whisett, president; L. C. Gates, secretary, and H. F. Kahmeier, treasurer, all of Jerico.

Kingsville, Nueces County, Texas.—The St. Louis, Brownsville & Mexico Railway has completed track to Brownsville, 141 miles, from Sinton. The company's staff is now composed as follows: U. Lott, president; R. J. Kleberg, first vice-president; Jeff N. Miller, secretary and vice-president and general manager; H. W. Adams, secretary; Edward Elliott, general counsel; J. B. Wells, general attorney; Duval West, assistant attorney; directors, B. F. Yoakum, S. W. Fordyce, L. H. West, Uriah Lott, John G. Kennedy, R. J. Kleberg, H. W. Adams, F. Yturria and J. B. Armstrong.

Knoxville, Tenn.—The Knoxville, LaFollette & Jellico Railroad (Louisville & Nashville system) is now operating track from Knoxville to Rydington, 20 miles, and at the northern end 30 miles are completed from Saxton, Ky., south. Construction trains have reached LaFollette, Tenn.

Knoxville, Tenn.—The Callahan Construction Co. of Knoxville has, it is reported, been awarded a contract by the Queen & Crescent to handle 150,000 yards of earth at South Fork, 130 miles south of Cincinnati. The work, it is stated, is filling in a large area near a bridge. Mr. G. B. Nicholson, chief engineer, writes the Manufacturers' Record that this contract consists of about 800 feet at the north and south ends of the viaduct at the south fork of the Green river.

Lake Charles, La.—Reported that the St. Louis, Watkins & Gulf Railway will build a branch to Welsh and Lake Arthur. H. B. Kane is vice-president and general manager.

Lexington, Ky.—Grading is reported under progress for a branch from the Lexington & Paris Electric Railway to Green Hills, the residence of J. B. Haggin.

Little Rock, Ark.—John Shain of Bowling Green, Ky., is reported to have the contract to clear the right of way for the proposed St. Louis, Little Rock & Gulf Railroad from Little Rock to Sheridan, Ark., 40 miles.

Memphis, Tenn.—R. A. Speed has been granted permission to build a switch to a warehouse.

Muskogee, I. T.—Reported that Judge Hutchins of Muskogee, acting for Pennsylvania capitalists, will apply for a charter at Guthrie, O. T., to build a railroad from Adair or Pryor creek, in the Cherokee Nation, to Blackwell, O. T.

Nashville, Tenn.—The Nashville, Chattanooga & St. Louis Railway is reported to have finished the Tracy City branch to Coal-mont, seven miles.

Norfolk, Va.—The Chesapeake Transit Co. has applied to the corporation commission for permission to increase its capital from \$1,000,000 to \$1,500,000. M. K. King is general manager.

Paducah, Ky.—Ferguson & Palmer, lumber dealers, will, it is reported, build a railroad about 10 miles long from Dyersburg, Tenn., along Forked Deer river, and it may be extended to Trenton, Tenn.

Pine Bluff, Ark.—Mr. E. C. Howell writes the Manufacturers' Record confirming the report that a movement is under way to build a railroad from there to connect with the Choctaw, Oklahoma & Gulf Railroad (Rock Island system), and saying a committee has been appointed to solicit subscriptions for the enterprise. An organization is to be formed and engineers employed to make a preliminary survey.

Sedgwick, Ark.—Mr. H. A. Culver, general manager of the Cache Valley Railroad Co., writes the Manufacturers' Record that the charter has been amended to build a line 27 miles long from Paragould to Walnut Ridge, connecting at Light with the main line running north. The construction work will be let in small sections to settlers along the line.

St. Louis, Mo.—H. B. Spencer, general manager of the St. Louis-Louisville lines of the Southern Railway, is reported as saying that it is the purpose of the company to build the projected extension to Danville, Ky. Work may begin soon.

Townsend, Tenn.—The Little River Railroad is reported to be building a four-mile branch southwest from a point near Townsend. The main line is from Maryville, 36

miles, to Cade's Cove. G. B. Townsend is chief engineer.

Westpoint, Ark.—The Westpoint Railroad Co. has been chartered to build from Westpoint to Kensett and Searcy, nine miles. The directors are C. W. Douthat, W. H. Foster and A. L. Williams of Westpoint, A. W. Yarnell of Searcy and N. Hardy of Westpoint. The other incorporators are H. A. Smith, M. B. Johnson, L. A. Smith and Orlando Miller of Westpoint, and W. B. Bean of Kensett.

Union, W. Va.—The Monroe Central Railroad Co. has been incorporated to build a line from a point near Patterson to Red Sulphur Springs, and thence via Union to Ron-everte. The incorporators are Joseph D. Logan, A. S. Johnson, W. H. Copeland, B. C. Young, S. F. Humphreys, Allen Caperton, J. W. Lynch and M. I. Kester.

Wilmar, Ark.—Mr. A. H. Gates informs the Manufacturers' Record that it will be some months before the Wilmar & Saline Valley Railway is extended.

Wilmington, N. C.—The Atlantic Coast Line Railroad is reported to be receiving bids until June 20 for the grading and masonry of double track between South Rocky Mount and Elm City, about eight miles. E. B. Pleasants is chief engineer; M. Riddle, Jr., assistant chief engineer.

Winchester, Va.—The Winchester & Washington Electric Railway Co. is reported organized to build a line between Winchester and Washington. Application will be made for a charter. N. H. Hansbrough, president of the Shenandoah National Bank, is president, and S. L. Hoover, superintendent of the United Telephone Co., is manager; Shirley Carter, secretary.

Street Railways.

Chattanooga, Tenn.—An ordinance is before the city council granting a franchise to S. W. Divine and associates to build an electric railway on 10th street from Georgia avenue to East End avenue; thence to Montgomery avenue, and along that thoroughfare to the city limits. It is said to be the purpose of Mr. Divine to build a line to Cleveland, Tenn., connecting there with the proposed Cleveland & Ducktown Interurban Railway.

Danville, Va.—Plans have been drawn for the proposed street-railway extension to Schoolfield. J. M. McGruder is city engineer.

Fort Worth, Texas.—Reported that Samuel Rosen of the Rosen Heights Street Car Co. has awarded to James Bayonset the contract for extending the line from North Fort Worth to the Texas & Pacific Railway station.

Memphis, Tenn.—The Memphis Street Railway Co. has been granted permission to build an extension from Central avenue east on Lamar boulevard to a point 300 feet east of Brown avenue, where the line will go on private right of way to Rozelle avenue. The company also petitions for permission to lay tracks from Charleston avenue along Jefferson street extended, Dunlap street and Bass avenue.

Muskogee, I. T.—It is reported that plans have been completed to build an electric street railway in Muskogee.

Oklahoma City, O. T.—Reported that the Metropolitan Railway Co. will build an extension.

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Automatic-sprinkler Equipment.—Maryland Color Printing Co., Holiday and Hillen streets, Baltimore, Md., is in the market for full automatic-sprinkler equipment with roof hydrants, underwriters' pump, roof tanks, etc.

Bark-chipping Machine.—J. B. McGahey & Bro., Basic City, Va., wants a bark-chipping machine.

Barrel Machinery.—Peter B. Forsyth, care of J. H. Bouslog, industrial agent Gulf & Ship

Island Railroad, Gulfport, Miss., wants prices on machinery for making barrels.

Barrel Machinery.—Collins Bros., P. O. Box 233, Marion, Va., wants catalogue or price-list of machinery for making barrel staves, heading, etc.

Belting.—F. R. Grimes, Cleveland, Tenn., wants to purchase belting for cotton gin.

Boiler.—See "Engine and Boiler."

Boilers.—See "Engines and Boilers."

Boilers.—James P. Copeland, Room 5, Robinson Building, Elizabeth City, N. C., wants boilers.

Boiler Tubes.—G. B. H. Stallings, Stallings, N. C., wants two and three-inch 12-foot second-hand boiler tubes. State prices and condition.

Box Machinery.—Peter B. Forsyth, care of J. H. Bouslog, industrial agent Gulf & Ship Island Railroad, Gulfport, Miss., wants prices on machinery for making boxes.

Building Equipment.—John B. Ransom, chairman board, West End M. E. Church, Nashville, Tenn., wants prices on brass rods for gallery, balusters, etc., and combination gas and electric chandelier.

Building Equipment and Supplies.—Henderson & Co., Ltd., 218 West Fayette street, and Wm. Steele & Sons, 17 West Saratoga street, of Baltimore, Md., want sub-bids on the following building materials for the warehouses for Lewis N. Hopkins to be located on Lombard and Balderston streets, on which they are bidding: Brick, stone, steel and iron work, roofing, mill work, grill work, hardware, metal work, painting, plastering, metal partitions. Plans and specifications for the above warehouses can also be seen in the Philadelphia offices of these firms.

Building Equipment and Supplies.—The Charles McCaul Company, builder, 123 West Saratoga street, Baltimore, Md., wants sub-bids on the following building equipment for the store building for the Robinson estate at 15 East Baltimore street on which it is bidding: Brick, stone, terra-cotta, excavation, steel and iron work, tin roofing, copper cornice, mosaic flooring, fireproof partitions, metal frames and sashes, metal skylight glazed with wireglass, plumbing, plastering, painting and glazing, radiators.

Building Equipment and Supplies.—The Athens Contracting Co., Athens, Ga., wants prices on structural steel, ornamental iron, expanded metal, patent plaster, Georgia white marble, Stone mountain granite, fireproofing, Portland, natural and non-staining cement.

Building Material.—W. F. Edwards, Hendersonville, N. C., wants prices on slate roof, galvanized-iron cornices and dome, plumbing, etc.

Building Material.—Monarch Oil & Gas Co., Shawnee, O. T., wants prices on iron building material.

Building Material.—Planters' Compress & Bonded Warehouse Co., West Point, Miss., wants prices on building material, brick, hardware, etc.

Building Materials.—J. F. Barnes, Greenville, Miss., wants bids on mantels, slate roof, wood-fiber plaster, hardware, tile floors, plumbing, electric wiring, steam heating, etc.

Building Materials.—James P. Copeland, Room 5, Robinson Building, Elizabeth City, N. C., wants prices on seven-eighths-inch Tennessee marble, marble for side wall and staircases, mosaic tiling for floors and walls, ornamental iron work for stair railings, bridges and railing around balconies, 1 beams 24 inches wide running 80 pounds to the foot, and different grades wire lathing.

Canning-factory Equipment.—Myron Taylor, P. O. Box 214, Laurens, S. C., wants catalogues and price-lists of machinery and equipment for canning factory.

Cement-tile Machinery.—Carolina Portland Cement Co., Charleston, S. C., wants prices and information on machinery and molds for manufacturing cement tiles.

Concrete Building Blocks.—Carolina Portland Cement Co., Charleston, S. C., wants prices and information on machinery for manufacturing artificial building blocks.

Cotton Compress.—Planters' Compress & Bonded Warehouse Co., West Point, Miss., wants equipment for cotton compress with capacity of 10,000 bales.

Cotton-gin Equipment.—F. C. Rogers, Fork, S. C., wants prices on two cotton gins, feeders and condensers and one cotton press; second-hand in good condition.

Culinary Utensils.—See "Grantware."

Desks.—R. L. Park, 701 Crawford street, Portsmouth, Va., wants prices on 75 double and 25 single desks.

Drilling Equipment.—Monarch Oil & Gas Co., Shawnee, O. T., wants prices on drilling machines.

Dry-kilns.—G. R. Farnham, Evergreen, Ala., wants prices on dry-kilns for veneering.

Electrical Equipment.—W. F. Edwards, Hendersonville, N. C., wants estimates on electrical equipment, etc.

Electric-light Plant.—See "Water-works."

Electric Motor.—Meridian Trunk Factory, 236½ Fourth street, Meridian, Miss., wants 10-horse-power electric motor.

Electric Motor.—John B. Ransom, chairman board, West End M. E. Church, Nashville, Tenn., wants prices on electric motor for organ.

Electric Pumps.—See "Elevator Plant."

Electric Wiring.—See "Building Materials."

Elevator.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids June 23 for the installation of an electric passenger elevator in the United States courthouse and post-office building at Covington, Ky., in accordance with drawings and specifications, copies of which may be obtained on application.

Elevators.—E. F. Aydtlett, Elizabeth City, N. C., wants bids on elevators.

Elevators.—James P. Copeland, Room 5, Robinson Building, Elizabeth City, N. C., wants freight and passenger elevators.

Elevators.—Athens Contracting Co., Athens, Ga., wants prices on elevators.

Elevator Plant.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will receive sealed proposals at his office until 3 P. M. June 27 for installation of elevator plant and electric house pumps in the United States postoffice and courthouse building at Baltimore, Md. Drawings and specifications covering same can be seen at his office in Washington.

Engine.—Brownsville Maine Slate Co., Worcester, Mass., wants six to eight-horse-power second-hand gasoline engine at low price.

Engine and Boiler.—Houk Ginning Co., Newton, N. C., wants second-hand 40 or 50-horse-power engine and boiler in good condition.

Engines.—Savannah Locomotive Works, P. O. Box 361, Savannah, Ga., wants one pair of second-hand steamboat engines for 90-foot stern-wheel boat, complete with centers and out-board bearings.

Engines and Boilers.—See "Saw-mill Machinery."

Engines and Boilers.—Peter B. Forsyth, care of J. H. Bouslog, industrial agent Gulf & Ship Island Railroad, Gulfport, Miss., wants prices on engines and boilers, 50 to 100 horse-power.

Graniteware.—O. S. Watts, 700 Rowland street, Canton, Ohio, wants addresses of manufacturers of granite and enamel wares for culinary purposes.

Handle Machinery.—J. B. Smith, R. F. D. No. 2, Louisville, N. C., wants prices on machinery for making plow handles.

Hardwood Novelties.—G. R. Farnham, Evergreen, Ala., wants to correspond with manufacturers of hardwood novelties.

Heating.—See "Building Materials."

Heating.—L. D. Smith, Crossville, Tenn., wants prices on hot-water heating apparatus for residence.

Heating.—E. F. Aydtlett, Elizabeth City, N. C., wants bids on heating plant.

Heating Apparatus.—James P. Copeland, Room 5, Robinson Building, Elizabeth City, N. C., wants boilers for heating purposes.

Heating Apparatus.—John M. Stukes, Austin, Texas, wants a machine for quickly heating a continuous current of air.

Heating Plant.—W. F. Edwards, Hendersonville, N. C., wants estimates on heating plant.

Holisting Engine.—Athens Contracting Co., Athens, Ga., wants prices on holisting engines.

Hoop Machinery.—See "Woodworking Machinery."

Hull Bran.—T. T. Wolfenden, Union Springs, Ala., wants to correspond with firms manufacturing finely-ground cottonseed hulls.

Ice Machine.—Magnolia Light & Ice Co., J. O. Hutcheson, president, Magnolia, Ark., wants prices on 15 or 20-ton ice machine.

Ironwork.—See "Building Materials."

Knitting Machinery.—M. L. Brown, Bremen, Ga., wants information on the manufacture of knit goods and estimates on cost of machinery.

Knitting Machinery.—W. B. Candler, Villa Rica, Ga., wants information on the manufacture of knit goods and estimates on cost of machinery.

Laundry Equipment.—A. A. Pearce, Beeville, Texas, wants prices on complete outfit for steam laundry (for town of 4000 inhabitants).

Laundry Equipment.—The A. P. Brantley

Co., Blackshear, Ga., wants prices on complete laundry equipment.

Organ.—John B. Ransom, chairman board, West End M. E. Church, Nashville, Tenn., wants prices on pipe organ.

Paper Manufacturers.—B. W. Wilson Paper Co., 12 Governor street, Richmond, Va., wants to correspond with mills desiring Richmond (Va.) outlet.

Plumbing.—See "Building Materials."

Plumbing.—E. F. Aydtett, Elizabeth City, N. C., wants bids on plumbing, bathtubs, etc.

Plumbing.—See "Building Materials."

Railway Equipment.—Walter A. Zelnicker Supply Co., 408 N. 4th street, St. Louis, Mo., wants one 36-inch gauge mogul locomotive to weigh not less than 35 tons, exclusive of tender.

Railway Equipment.—Peacock's Iron Works, Selma, Ala., wants a small locomotive, about 15 or 20 tons, small driving wheels and forward trucks, tank or tender behind; not saddle tank.

Railway Equipment.—R. K. Papin, 408 North 4th street, St. Louis, Mo., wants one standard gauge American-type engine weighing less than 30 tons.

Road building.—County Commissioners of Rockingham county, Wentworth, N. C., will open bids June 27 for macadamizing three or four miles of road from Rockhouse creek to County Home. For further information address J. A. Seales, clerk, Wentworth, N. C.

Saw-mill Machinery.—The Florida Timber Co., 401 Thiesen Building, Pensacola, Fla., wants prices on engines and boilers combined and general saw-mill machinery.

Sewerage.—Engineer United States Geological Survey, Lawton, O. T., will receive sealed proposals in duplicate until June 25 for the construction of a sanitary sewer system and a portion of the storm-sewer system for the city of Lawton. Specifications and forms of proposal may be obtained on application to engineer, Lawton. Certified check for 5 per cent. of aggregate amount thereof and payable to E. A. Hitchcock, Secretary of the Department of the Interior, United States Geological Survey, Washington, D. C., must accompany each bid.

Shingle Machinery.—Battle-Matthews Lumber Co., Pee Dee, S. C., wants to correspond with parties handling shingle machinery.

Shingle Machinery.—Collins Bros., P. O. Box 233, Marion, Va., want catalogues or price-lists of machinery for making shingles.

Steel Bridge.—D. C. Ladd, John T. King, W. S. Johnson and A. C. Stiel, commissioners, Lockesburg, Ark., will let contract on July 9 for the construction of steel bridge 198 ft with 12-foot roadway in the clear, to rest on steel cylinder piers 42 inches in diameter and to have 19-foot wood approach at one end and 152 feet at other. A deposit of \$500 will be required before bidding. For further particulars see plans and specifications on file in County Clerk's office.

Street Improvements.—See "Water-works."

Street Improvements.—H. B. F. Macfarland, Henry L. West, John Biddle, commissioners, Washington, D. C., will open bids June 18 for grading certain streets and avenues, aggregating about 41,000 cubic yards of grading. Blank forms of proposals, specifications and all necessary information will be furnished on application to the office of the Engineer Commissioner, D. C.

Stove Plate.—The Mobile Stove & Pulley Co., Mobile, Ala., wants prices on stove plate.

Tiling.—See "Building Materials."

Water-works.—City of Lexington, N. C., John H. Moyer, mayor, wants to correspond with engineers relative to making surveys, estimates, etc., for water-works, electric-light plant and street improvements, for which \$50,000 of bonds was recently voted.

Water-works.—Shinnston Light & Water Co., Shinnston, W. Va., will open bids June 18 for the construction of a water-works system in Shinnston. Maps, plans and specifications may be seen at Leslie Hawker & Co.'s. Certified check for \$500, made payable to the treasurer of the company, must accompany each bid. Company reserves usual rights.

Water-works.—City of Jefferson, Texas, J. H. Rowell, Jr., mayor, will open bids July 5 for construction of system of water-works. Certified check for \$500 must accompany each bid. Usual rights reserved; \$12,500 available.

Water-works Equipment.—City of Statesville, N. C., J. C. Steele, mayor, wants prices on piping necessary for water-works, except mains to and in the city.

Woodworking Machinery.—See "Shingle Machinery."

Woodworking Machinery.—See "Handle Machinery."

Woodworking Machinery.—See "Barrel Machinery."

Woodworking Machinery.—Leesville Manufacturing Co., Leesville, S. C., wants an auger to bore columns.

Woodworking Machinery.—See "Bark-chipping Machine."

Woodworking Machinery.—Meridan Trunk Factory, 232 1/2 Fourth street, Meridan, Miss., wants planer and resaw to rip as wide as 12 inches.

Woodworking Machinery.—H. H. Moore, Waynesboro, Miss., wants machine for sawing dogwood blocks measuring from four inches to eight inches in diameter and from 12 to 16 inches long, bolting into pieces one and one-quarter to two inches square.

Woodworking Machinery.—G. R. Farnham, Evergreen, Ala., wants prices on machinery for working up slabs and other waste material into crate stock.

Woodworking Machinery.—See "Barrel Machinery."

Woodworking Machinery.—See "Box Machinery."

MEXICO.

Cattle Ranches.—Messrs. William E. Ryder and a Mr. Walsh of Boyle & Walsh, wholesale grocers, both of Chicago, Ill.; W. E. Rose of Owensboro, Ky., and associates will organize a stock company, with capital of \$500,000 (gold), to establish cattle ranches in the State of Vera Cruz. They will stock the first ranch with 25,000 head of cattle and mules.

Concentrating Mill.—The El Tigre Consolidated Gold Mining Co. of Baylape, Sonora, contemplates building a concentrating mill to be operated by water-power. It is also proposed to construct either a wire cable-way or a narrow-gauge railroad from the water-power site to the mines, 12 miles distant.

Electric Plant.—Carlos Fenelon, Benj. W. Wallace and John S. Ickis of Guadalajara, Jalisco, who lately purchased the Barranca del Oro mining property near Ixtlan, are obtaining estimates on the cost of installing an electric-power plant and building a tramway at the mines.

Electric-power Plant.—Dr. Carlos Fenelon, Dr. Benj. W. Wallace and John S. Ickis, all probably of Chihuahua, Chl., have purchased mining property and are considering estimates on the construction of electric-power plant and tramway to facilitate operations at the mines. A 15-stamp mill is completed.

Ice-manufacturing Plant.—Messrs. Depew & Co. contemplates building an ice-manufacturing plant at Durango, Dur.

Iron Mines.—Carlos Meislahn of Aguascalientes, Aguascalientes, has solicited title to 42 mining pertenencias, the veins showing iron, with traces of silver and copper.

Levitation Plant.—Theodore Breidenbach, now in Monterey, New Leon, is designing a plant for levitating 600,000 tons of silver ore on the dump of an ancient mine in the State of Zacatecas.

Mining Developments.—The Santa Fe Mining & Milling Co. of Oaxaca, Oax., organized several months ago with \$250,000 capital stock, has begun active developments of its mining properties.

Mining Property.—The Chicago Mining Co., Ltd., of London, England, has purchased 20 pertenencias of mining land at Santa Eulalia and will develop the property. Dr. R. Emerson, probably of the City of Mexico, represents the company.

Mining Properties.—A syndicate of English capitalists is negotiating for mining properties to be purchased from Smith, Dunham & Reid of Los Angeles, Cal., and Denver, Col.

Mining Properties.—Chicago capitalists have purchased the San Cayetano, La Cumbre and Catorce Marcos mines at La Parilla, Durango, and will develop them, installing modern machinery and otherwise providing facilities.

Smelting Plant.—Enrique Creel of Chihuahua, Chl., and his associates, who are to build an independent smelter in the State of Chihuahua, have engaged James E. Malcolmson of El Paso, Texas, to prepare plans and specifications for the plant.

Stock Ranch.—E. A. Trimble of Abilene, Texas, will probably establish a stock ranch in the State of Vera Cruz.

Water-works and Sewerage.—The city of Cordoba, Vera Cruz, has awarded contract to the Mexican Construction & Engineering Co. of the City of Mexico for the construction of municipal water-works and sewerage system. Water will be taken from the Rio Seco river, flowing about 125 liters per second. About \$29,000 (silver) will be the cost of the work. Paul R. Leltz and Ignacio Munez, civil engineers, of the City of Mexico, represented the company.

Water-power Plant.—The Santa Gertrudis Cotton Mills of Orizaba, Vera Cruz, will enlarge its water-power plant. A. E. Worswick is the engineer in charge of the improvements.

Railways.

Steam Railroad.—A railroad, narrow gauge, will be constructed connecting San Juan Chapultepec with Ayotzaco, in the State of Oaxaca, a distance of 80 kilometers. The name of the company handling the undertaking is Compania de los Ferros Carriles Urbano y Agricola de Oaxaca de Oaxaca.

Electric Railway.—Mackin & Dillon, contractors, of Monterey, Mexico, have been granted an extension of their concession to December 5, 1904, to build an electric railway from Monterey to Villa Guadalupe. Three kilometers must be completed by the date named.

Steam Railroad.—The Southern Pacific is reported to have incorporated the Inter-California Railway Co. to build the proposed extension southward to Ensenada, in Lower

California. W. Hood is chief engineer at San Francisco, Cal.

Steam Railroad.—J. G. Metcalfe of Durango, president of the International Railroad, with headquarters in that city, is authority for the announcement that a branch will be built from the main line at San Pedro to El Oro.

Steam Railroad.—Reported that Col. Jas. C. Wright of Denver, Col., is representing a syndicate which proposes to build a railroad from a point near Los Reyes, on the Mexican Central, to Acapulco, on the western coast of Mexico, about 530 kilometers. The line will run through rich mining regions in the States of Michoacan and Guerrero. A survey is to be made according to a report, and the line, it is said, will run via Apundaro, Tepecan and Atoyac.

Steam Railroad.—The La Dicha Mining & Smelting Co. is reported to have obtained a concession for a railroad in the State of Guerrero, starting from Puerto Marquez, on the Pacific coast, northeast to La Dicha and perhaps to Chilpancingo.

INDUSTRIAL NEWS OF INTEREST

Oak Timber Land.

A tract of 20,000 acres of timber land in Northern Louisiana is offered for sale by J. L. Farley of De Soto, Mo.

A Portland-Cement Proposition.

F. B. Shirley, receiver, Summitville, Tenn., offers for sale a Portland-cement proposition located on railway sidings, with quarry, natural gas, stone, coal, water-power, etc. Write for details.

A Rand Contract.

The Rand Drill Co. of New York has secured, after severe competition, a contract from the Safe Investment Gold Mining Co. for an air compressor and several rock drills of the Sluggar type.

Time Detector for Sale.

A Hahn Watchman's Portable Time Detector, complete with 12 keys, the instrument being almost new, is offered for sale at \$25 by the Mayo Knitting Machine & Needle Co., Franklin Falls, N. H.

Control of Cotton-Cloth Mill.

Investors seeking an opening in the cotton-manufacturing industry are advised to write "Financier," care the Manufacturers' Record. They can thus obtain information regarding controlling interest in a Southern cotton-cloth mill of 12,500 spindles and 350 looms.

John Dyer, Jr., in Baltimore.

Among the prominent Northern builders who have located in Baltimore to take part in rebuilding the burned district is John Dyer, Jr., of Albany, N. Y. Mr. Dyer makes a specialty of fireproof construction, but does not limit himself to it. He has established his Baltimore office at 220 North Liberty street.

National-Acme in New York.

The National-Acme Manufacturing Co. of Cleveland, Ohio, announces the opening of its New York office, R. A. Scranton, manager, in the St. Paul Building, 220 Broadway. Inquiries and orders can be sent there for the Acme automatic multiple-spindle screw machines, Acme screw slotters, semiautomatic, cap screws, set screws, etc.

Manufacturing Plant for Sale.

A manufacturing plant located in New England will be offered at public auction on June 28. The property includes complete equipment and valuable patents for manufacturing hardware specialties now in active demand. Catalogues giving full description can be obtained by addressing John F. Meyer, attorney, 132 Nassau street, New York.

Furniture Factory for Sale.

The receiver of the Shenandoah Furniture Manufacturing Co. will offer the property for sale on July 30. This plant includes buildings, machinery and land, the equipment being modern and designed for the production of a general line of furniture. It is located at Shenandoah, where the sale will be held publicly. John T. Harris, the special commissioner, can be addressed at Harrisonburg, Va., for information.

Wants Engine and Boiler Agency.

Manufacturers of steam engines and boilers desirous of being represented in the territory tributary to Richmond are invited to address the Southern Machine Manufacturing Co. (Inc.), 1112 E. Main street, Richmond, Va. The company frequently has calls for engines and boilers under circumstances where it cannot place its gasoline engines

and is therefore prepared to arrange for taking the agency for some well-established engine and boiler works.

Largest Order for Safety Valves.

The N. L. Hayden Manufacturing Co., Columbus, Ohio, manufacturer of metallic packing and safety valves, have just secured a contract for 6000 five-inch safety valves, which is said to be the largest order for safety valves ever given in this country. An idea of the magnitude of this order is obtained by considering that it will require over 25 tons of material and will keep the company's valve department running night and day until September 1. It is gratifying to know that this industry is so prosperous.

Saves 75 Per Cent. of the Oil Bill.

Messrs. Adam Cook's Sons, 313 West street, New York city, the only makers of Albany Grease, claim that the use of their well-known lubricant will save one-half of the oil bill. Testimony received from engineers who have used Albany Grease show even a larger saving than this. Allan S. Ferry, engineer of the Locomobile Company of America, writes from Bridgeport, Conn., as follows: "We are using Albany Grease on our three air compressors, and since using it our oil bill has been reduced at least 75 per cent. and the machines are better lubricated than ever."

Vice-President of the Engineering Co.

Paul M. Mowrey, who for the last three years has been connected with the Merchants' Trust Co. as adviser on industrial investments, has assumed the office of vice-president of the Engineering Company of America, 74 Broadway, New York. Mr. Mowrey has been prominently identified with the engineering and contracting business since 1888, when he became connected with the Edison Illuminating Co. Among his numerous successful enterprises was the purchase and consolidation of the street-railway and power companies of Richmond, Va., which were later turned over to Frank Jay Gould.

Kitchen Ventilation.

A matter of great importance is the proper ventilation of kitchens in hotels and restaurants. Not only is it important to the welfare and comfort of the chefs, but very often to the guests, as it often happens that odors from the kitchen escape to other parts, very often up through the elevator shaft. Usually the kitchen is low-studded, and the odors arising make the room almost uninhabitable, especially in warm weather. Proper ventilation can be obtained by the employment of some artificial means which will always be entirely independent of the weather. The air must be exhausted and fresh air take its place. This is readily accomplished by the fan system of ventilation. The kitchen of the Hotel Touraine, the Parker House and Young's Hotel in Boston, the Allyn House in Hartford, Conn.; the Hotel Worthy, Springfield, Mass.; the hotels in New York, such as the Waldorf-Astoria, and many other hotels throughout the country are ventilated by the Sturtevant Fan System. In one case it was found by test without the use of the fan system, when the thermometer was 90 degrees outdoors, the temperature within six feet of the kitchen ranges was between 120 degrees and 135 degrees. After the fan was in operation, with an outside temperature of 90 degrees, the temperature in the kitchen the same distance away from the ranges was only 92 degrees. The B. F. Sturtevant Company of Boston can furnish details of such installations.

BALTIMORE'S WATER SERVICE.

Lessons Drawn by City Engineer Quick From the February Fire.

Mr. Alfred M. Quick, water engineer of this city, presented last week before the American Water-Works Association at St. Louis a comprehensive and interesting paper on the water service at the Baltimore fire. In introducing his paper he said that after carefully considering the matter and attempting to collect information in preparation for such a paper he found that while most valuable lessons are to be learned from the fire in relation to the comparative merits of different styles of building construction, of various building materials and of various appliances for fire protection in buildings, he was somewhat doubtful as to whether much of value was to be learned in relation to the water service. He, however, thought that water-works officials might be interested in some points brought out by the fire as to the adequacy of any water service to cope successfully with such an emergency, as to the possibility of the waste from broken water pipe in buildings destroyed by fire temporarily crippling the water service, and as to the effectiveness of private fire-service fixtures in protecting property. In explanation of conditions in Baltimore he sketched the water-works system of this city and the vast improvement made in it during the past six or seven years. He gave details of the course of the fire and the mechanical means for fighting it, dwelt upon the peculiar conditions of its origin and history, and said:

"With a sufficient force of firemen and sufficient apparatus to cover the van and the flanks of the fire line, and to skirmish ahead of it, working intelligently and fearlessly with first-class apparatus and an adequate water supply, and then failing to stop the fire, the next question that naturally arises is: Would the work of these men have been any more effective in stopping the fire with an independent high-pressure fire-service system such as has been installed in Philadelphia and other large cities in this country? Assuming such a system to have been installed in Baltimore, completely covering the burned district and embodying all of the most desirable features that the latest experience and development would suggest, the greatest advantage for fire service that could have been claimed for it, as compared with what our ordinary water-supply system offered, it seems to me, would be that more streams of a somewhat larger diameter and at a somewhat higher pressure would have been available for concentration at any one point; that these streams could have been more quickly brought into play, and that the same force of firemen could have covered a greater area or handled more streams at any one point. In an emergency of such magnitude, involving so many elements of uncertainty, one hesitates to venture a positive opinion as to what would have resulted with a different system or a different method of procedure. Nevertheless, I believe that it is extremely doubtful, in view of the peculiar conditions under which the fire originated and spread, if an independent high-pressure fire-service system, with the advantages I have mentioned, would have enabled the firemen to stop the fire before it could burn itself out. * * * Under such conditions one cannot but believe that such advantages as an independent high-pressure fire system would have offered would have made very little, if any, difference, either in the rate of progress or the extent of the fire. In stating this conclusion I wish to emphasize that I have a full appreciation of the value of such a system. I believe that in the great majority of cases, with proper provisions, it would be much more effective than the fire-engine

service, and I am frank to say that I believe it would be very much to our advantage to have such a system in Baltimore."

Engineer Quick mentioned special cases where private fire services had rendered efficient work, and said on that point:

"It is thus apparent that private fire services were of incalculable value in protecting property from destruction during the great fire of February 7 and 8. It is generally conceded that they were mainly responsible for saving the seven properties that I have enumerated, and that they materially aided in the protection of some adjoining buildings. Nobody knows how many more buildings in the vicinity might have been destroyed, with additional millions of dollars loss, if these properties had burned, but these alone, with their contents, represent a valuation of considerable over \$5,000,000."

"The lessons to be drawn from this experience would therefore seem to warrant the conclusion that private fire services are of great mutual advantage to the owners of property, the insurance companies and the city in general; also that any water department or water company is justified in granting all reasonable requirements of the Underwriters' Association in regard to such services that the limitations of the water-works system will permit."

He showed that the very large amount of waste of water, in addition to the amount drawn for fire service and for ordinary domestic consumption, did not seriously affect the water service because of the city's having a very great excess of storage pumping and distributing capacity over what the ordinary domestic consumption would require, and in conclusion he said:

"It did, however, prevent our being able to increase the pressure above the normal in the low-service section of the burned district in the later hours of the fire. It also materially reduced the pressure in some sections of the city adjoining the burned district immediately after the fire was over."

"It is evident that in some cities where the amount of storage, pumping or delivering capacity of the water-works system is not so much in excess of the normal demands for domestic consumption, as it is in Baltimore, such a sudden and proportionately large increase in the consumption for fire service and waste through broken pipes would have seriously crippled the water service, with possible disastrous results."

"To summarize, therefore, the deductions which from the viewpoint of a water-works official I draw from this experience:

"1. There are some fires which no water-supply system, no matter how adequate it may be, will put out."

"2. Private fire services can do very effective work in protecting property, and their installation should therefore be encouraged within reasonable limits."

"3. Every water-supply system should have a liberal excess of storage, pumping or delivering capacity over the demands for ordinary domestic consumption to prevent the very large increase in draught for fire service and waste from crippling the service in such emergencies."

Mitsui & Co., a leading financial firm of Japan, with many ramifications and with branches in New York, San Francisco and European cities, are preparing to establish a branch in New Orleans.

The Progressive League of Monroe, La., has been organized with Messrs. J. M. Keller, president; W. A. Brown, Geo. C. Weeks and R. A. Shotwell, vice-presidents; U. Millsaps, treasurer, and H. D. Aggar, secretary. It will begin work at once for the advancement of the city.

GRAIN AND GULF PORTS.

Natural Forces Strengthening the South's Commercial Position.

In a recent bulletin Messrs. Fisk & Robinson of New York published as a supplement an industrial map of the United States showing the territory tributary to the Southern Gulf ports by reason of lower cost of transportation. They have published the following addenda by Dr. Norton:

"It is interesting, in this connection, to consider the agricultural production of this Southern empire in relation to the total production of the United States. Taking the three great products of the soil, wheat, corn and oats, the following table shows the proportionate amount raised within the territory tributary to the Southern ports in percentages of the total production of these staples for the entire United States:

	Percentage raised within the territory tributary to Southern ports.	Farm value.
Corn.....	74.7	\$610,000,000
Oats.....	53.6	145,000,000
Winter wheat.....	58.6	150,000,000
Spring wheat.....	30.8	50,000,000

"Of the total of 3,664,000,000 bushels for these three products produced in the United States, having a farm value of \$1,664,000,000, and amounting to, roughly, 3,500,000 carloads, 65.6 per cent., 2,403,000,000 bushels, or over \$950,000,000 in farm value, are produced within the territory which, on the present basis of rates and distance, is tributary to the Southern ports. If we include cotton, which is practically entirely produced within this area, the farm value is swelled to the enormous total of approximately \$1,500,000,000. These enormous values, which enter largely into foreign commerce, both directly and indirectly, coupled with the saving in cost of transportation via the Southern ports and the additional advantage of lower ocean freight rates in the Gulf section, are the natural forces which are the sheet anchors of the looming industrial greatness of the South. The article in your last bulletin has been editorially criticised by the Boston Herald on the ground that the exports of the future will consist largely of manufactured articles. This is probably in a measure true, but as the New Orleans Times-Democrat editorially suggested, in commenting upon the figures, there is a shifting process now at work tending to bring the factories closer to the localities in which the raw materials originate. The pronounced growth of the cotton-manufacturing industry in the South has been widely commented upon. Less has been said of a parallel movement which has been taking place so rapidly during the last five years that it has largely escaped statistical tests, the springing up of thousands of small manufacturing plants throughout the agricultural sections of the country. This is particularly striking in the case of foodstuffs, which are being milled more at the 'points of origin. This tendency has resulted in rendering the statistics of visible supplies very fallacious as a test of the invisible supply, and if, as the Boston Herald believes, as the years go by the exports of commodities other than cotton, breadstuffs, provisions and meat animals increase the more rapidly, the larger part of the increase will probably consist of the raw materials converted into finished articles at the places where the raw materials originate. In other words, increase in exports of manufactured articles will simply mean that the inhabitants of this more favored area, this inland empire which is tributary to the Southern Gulf ports, as we have pointed out, are taking their full advantage of the opportunities vouchsafed by favorable location in adding the value of labor to the value of the raw material."

FINANCIAL NEWS

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office Manufacturers' Record, Baltimore, Md., June 15.

Some improvement in the demand for securities assisted the Baltimore stock market in making a demonstration of activity during the past week, the principal feature being an advance in Northern Central Railway stock warrants, which rose several points, the principal incentive being inquiry from Philadelphia, which drove shorts to covering. United Railways first consolidated mortgage 5s also advanced fractionally, but the income bonds receded to a new low record. The other usually active issues were rather neglected, but investment securities were well sustained in value.

In the trading United Railways common sold at 5 3/4 and 6, the incomes from 45 down to 43 3/4 and the 4s from 89 3/4 up to 90 3/4, the last sale being at 90 1/2; Consolidated Gas at 70 and 71, the 6s at 111 1/2 and the 5s at 112 1/4; Seaboard common from 8 down to 7 1/2, the preferred at 16 1/2 and 16 3/4, the 4s at 69 3/4 down to 69 1/2, the 10-year 5s from 97 to 97 1/2, and the three-year 5s at 86 and 86 1/4; Cotton Duck common at 2 and 1 3/4, the 5s at 58; G. B. S. Brewing incomes at 19 3/4 and 19 1/2, and the 1sts at 48 1/2 to 49.

Bank stocks were dealt in as follows: Union, 117; Merchants', 165 and 170; Western, 35; Mechanics', 28.

Other securities traded in were: Northern Central stock warrants, from 7 1/4 down to 7 1/2, and with slight fluctuations up to 15, the last sale being at 14; Northern Central shares, 72 1/2; Atlantic Coast Line 4s, certificates, 83 1/2; do. consolidated 4s, 95 1/2; Charleston & West. Carolina 5s, 110 3/4; Georgia & Alabama consol. 5s, 105 1/4 to 105 3/4; Georgia, Carolina & Northern 5s, 108 1/2 and 108 3/4; Raleigh & Gaston 5s, 112 1/2; Raleigh & Augusta 6s, 119; Seaboard & Roanoke 5s, 108 1/4; Virginia Midland 5ths, 111 1/2; Baltimore Traction 5s, 112 1/2; City & Suburban 5s (Baltimore), 112 1/2; North Baltimore 5s, 116 and 116 1/2; Toledo Traction 5s, 101 1/2 and 102; Georgia Southern & Florida 5s, 114 to 114 1/2; Rochester Street Railway 5s, 109; Florida Southern 4s, 90 to 92; South Bound 5s, 107 and 107 1/2; Virginia Century, 95 1/2; Atlantic Coast Line stock, 108 1/2 and 109; Columbia & Greenville 6s, 117 1/4; Virginia Midland 2d 6s, 112 1/2; do. G. M. 5s, 111 1/4; City & Suburban 5s (District of Columbia), 98 1/2; Carolina Central 4s, 93; Atlantic Coast Line 4s (Connecticut), 90; Georgia Pacific 1sts, 122 1/2; Norfolk & Carolina 5s, 115 1/2; Atlanta Street Railway 5s, 106 1/2; Atlantic Coast Line of Connecticut, 225.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended June 15, 1904.

Railroad Stocks.	Par.	Bid.	Asked.
Atlanta & Charlotte.....	100	157 1/4	164
Georgia Sou. & Fla. 1st Pref.....	100	...	95 1/2
Georgia Sou. & Fla. 2d Pref.....	100	...	70
United Railways & Elec. Co.....	50	5 1/2	6
Seaboard Railway Common.....	100	7 1/2	7 3/4
Seaboard Railway Preferred.....	100	15 1/2	16 1/2
Atlantic Coast Line.....	100	108 1/2	109
Atlantic Coast Line of Conn.....	100	221	...
Bank Stocks.			
Citizens' National Bank.....	10	...	26 1/2
Farmers & Mer. Nat. Bank.....	40	...	55
German-American Bank.....	100	...	106
Merchants' National Bank.....	100	...	165
National Bank of Baltimore.....	100	...	114 1/2
National Exchange Bank.....	100	...	190
National Howard Bank.....	10	11	...
National Mechanics' Bank.....	10	27 1/2	29
National Union Bank of Md.....	100	117	117 1/2
Third National Bank.....	100	...	125
Western National Bank.....	20	35	...
Trust, Fidelity and Casualty Stocks.			
Baltimore Trust & Guaranty.....	100	225	250
Fidelity & Deposit.....	50	...	130
International Trust.....	100	...	92
Mercantile Trust & Deposit.....	50	...	135

Union Trust.....	50	40
U. S. Fidelity & Guaranty.....	100	100
Miscellaneous Stocks.		
G. B. & S. Brewing Co.....	100	4
United Elec. L. & P. Pref.....	100	27 1/2
Cotton Duck Vending Trust.....	100	1 1/2
Consolidation Coal.....	100	68 1/2
George's Creek Coal.....	100	86
Consolidated Gas.....	100	70 1/2

Railroad Bonds.		
Albany & Northern 5s.....	50	93
Atlanta & Charlotte 1st 7s, 1907.....	100	109 1/2
Atlantic Coast Line Con. 4s.....	100	95 1/2
Char., Col. & Aug. 1st 5s, 1910.....	116	110
Char., Col. & Aug. 2d 7s, 1910.....	110	110
Columbia & Greenville 1st 6s, 1916.....	117 1/2	117 1/2
Georgia, Car. & North 1st 5s, 1920.....	108 1/2	109
Georgia South. & Fla. 1st 5s, 1915.....	114 1/2	114 1/2
Georgia Pacific 1st 6s, 1922.....	122 1/2	122 1/2
Petersburg, Class B 6s, 1926.....	123	123
Piedmont & Cum. 1st 5s, 1911.....	105 1/2	105 1/2
Raleigh & Augusta 1st 6s, 1926.....	119	125
Richmond & Danville Gold 6s, 1915.....	115	115
Savannah, Fla. & West. 5s, 1934.....	112	112
Seaboard & Roanoke 5s, 1926.....	108 1/2	108 1/2
Southern Railway Con. 5s, 1904.....	117 1/2	117 1/2
Virginia Midland 1st 5s, 1909.....	104	104 1/2
Virginia Midland 2d 6s, 1911.....	111 1/2	112 1/2
Virginia Midland 4th 3-4-5s, 1921.....	109	109
Virginia Midland 5th 5s, 1926.....	111	111
West. North Carolina Con. 6s, 1914.....	116	116
West Virginia Central 1st 6s, 1911.....	111 1/2	111 1/2
Wilmington, Col. & Aug. 6s, 1910.....	109	110
Wilmington & Wel. Gold 5s, 1935.....	116	116
Charleston Con. Electric 5s, 1909.....	85	85
Knoxville Traction 1st 5s, 1928.....	101 1/2	101 1/2
United Railways 1st 4s, 1919.....	90	90 1/2
United Railways Inc. 4s, 1919.....	43 1/2	43 1/2
Seaboard 4s.....	69 1/2	70
Seaboard 10-year 5s.....	97 1/2	97 1/2
Augusta Railway & Electric 5s.....	99 1/2	100
Macon Railway Con. 5s.....	90	93
Seaboard 3-year 5s.....	85	85 1/2
Lexington Railway 1st 5s.....	99 1/2	102
Richmond Traction 5s.....	106	106
Georgia & Alabama Con. 5s.....	105 1/2	106

Miscellaneous Bonds.		
Mt. V. & Wood's Cot. Duck 5s.....	58	60
G. B. & S. Brewing 1st 3-4s.....	48 1/2	49
G. B. & S. Brewing 2d 4s.....	19	20
United Elec. Light & Power 4 1/2s.....	73 1/2	73 1/2
Atlanta Gaslight 1st 5s, 1917.....	103	103
Consolidated Gas 6s, 1910.....	111 1/2	111 1/2
Consolidated Gas 5s, 1939.....	112	112 1/2

SOUTHERN COTTON-MILL STOCKS

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending June 14.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	60	71
Aiken Mfg. Co. (S. C.).....	85	90
Anderson Cotton Mills (S. C.).....	121	121
Arkwright Mills (S. C.).....	105	105
Augusta Factory (Ga.).....	72	75
Belton Mills (S. C.).....	100	101 1/2
Brandon Mills (S. C.).....	106	106
Buffalo Cotton Mills (S. C.).....	102	102
Buffalo Cotton Mills (S. C.) Pfd.....	92	92
Cabarrus Cotton Mills (N. C.).....	122	122
Chiquita Mfg. Co. (S. C.).....	89	89
Clifton Mfg. Co. (S. C.).....	91	91
Clinton Cotton Mills (S. C.).....	135	135
Courtenay Mfg. Co. (S. C.).....	116	116
Columbus Mfg. Co. (Ga.).....	89	89
Dallas Mfg. Co. (Ala.).....	79	85
Darlington Mfg. Co. (S. C.).....	90	92
Eagle & Phenix Mills (Ga.).....	112 1/2	112 1/2
Easley Cotton Mills (S. C.).....	100	104
Enoree Mfg. Co. (S. C.).....	79	81
Enterprise Mfg. Co. (Ga.).....	76	80
Exposition Cotton Mills (Ga.).....	160	200
Gaffney Mfg. Co. (S. C.).....	67	70
Gainesville Cotton Mills (Ga.).....	75	75
Graniteville Mfg. Co. (S. C.).....	132 1/2	135
Greenwood Cot. Mills (S. C.) old.....	102	102
Grendel Mills (S. C.).....	100	102
Henrietta Mills (N. C.).....	190	200
King, John P. Mfg. Co. (Ga.).....	90	90
Lancaster Cotton Mills (S. C.).....	100	110
Lancaster Cot. Mills (S. C.) Pfd.....	100	100
Langley Mfg. Co. (S. C.).....	96	100
Laurens Cotton Mills (S. C.).....	170	170
Lockhart Mills (S. C.).....	102	102
Louise Mills (N. C.).....	100	100
Louise Mills (N. C.) Pfd.....	102	102
Marlboro Cotton Mills (S. C.).....	100	100
Mills Mfg. Co. (S. C.).....	100	100
Mills Mfg. Co. (S. C.) Pfd.....	100	100
Monarch Cotton Mills (S. C.).....	90	90
Monaghan Mills (S. C.).....	100	105
Newberry Cotton Mills (S. C.).....	111 1/2	111 1/2
Norris Cotton Mills (S. C.).....	108	108
Odell Mfg. Co. (N. C.).....	100	100
Orangeburg Mfg. Co. (S. C.) Pfd.....	102	102
Orr Cotton Mills (S. C.).....	100	101
Pacolet Mfg. Co. (S. C.).....	88	88
Pacolet Mfg. Co. (S. C.) Pfd.....	97	97
Pelzer Mfg. Co. (S. C.).....	150	150
Piedmont Mfg. Co. (S. C.).....	185	185
Poe Mfg. Co. F. W. (S. C.).....	134	134
Raleigh Cotton Mills (N. C.).....	105	105
Roanoke Mills (N. C.).....	102	102
Saxon Mills (S. C.).....	100	102
Sibley Mfg. Co. (Ga.).....	62 1/2	65
Southern Cotton Mills (N. C.).....	95	95
Spartan Mills (S. C.).....	140	140
Tuspan Mills (S. C.).....	141 1/2	141 1/2
Union Cotton Mills (S. C.).....	145	150
Victor Mfg. Co. (S. C.).....	132	132
Warren Mfg. Co. (S. C.).....	101	103
Warren Mfg. Co. (S. C.) Pfd.....	105	108
Washington Mills (Va.).....	20	20
Whitney Mfg. Co. (S. C.).....	116	116
Wilmington Cot. Mills (N. C.) Pfd.....	100	100
Woodruff Cotton Mills (S. C.).....	90	90

New National Banks.

A bulletin issued from the office of the comptroller of the currency says that 42 national banks were organized during May, and that in the number of new organizations the Southern States lead with 16, the middle West following with 11. In the number of national banks organized from the date of passage of the act of March 14, 1900, to May 31, 1904, Texas leads all States in the country with a total of 226, Pennsylvania being next with 223. The capital of the banks organized during

that period in the Southern States, \$27,146,500, is not far behind the total capital of the banks then organized in the Eastern States, which amounted to \$28,824,000. The increase in the number of national banks in Oklahoma and the Indian Territory is also a notable feature of the growth of banking facilities in the Southern and Southwestern country.

New Corporations.

The Farmers and Merchants' National Bank of Onley, Va., has begun business.

The Bank of Yancey has been organized at Burnsville, N. C., with \$10,000 capital.

The National Bank of Norman, O. T., capital \$25,000, has been authorized to begin business.

The People's Bank & Trust Co. has begun business at Nettleton, Miss. Charles A. Roberts is cashier.

The Mooresville Savings Bank has been incorporated at Mooresville, Mo., by J. A. McMillen, Albert Rockhold, J. H. Cusick and others.

The Citizens' Bank of Kirksville, Mo., with \$80,000 capital, has been incorporated by W. G. Fout, Warren Hamilton, J. E. Waddell and others.

The Arrow Rock Stock Bank has been incorporated at Arrow Rock, Mo., with \$15,000 capital, by J. F. Moseley, W. A. Hogge, T. F. Marshall and others.

The New Florence Bank has been incorporated at New Florence, Mo., capital \$10,000, by W. R. Hollingsworth, B. F. Garnett, B. E. Wilson and others.

The River Accident Insurance Co. of Bramwell, W. Va., has been incorporated; authorized capital \$5000. The incorporators are A. I. Godfrey of Bramwell and five others.

The Bank of White Plains at White Plains, Ga., has been chartered with \$25,000 capital. Those interested are I. D. Walker, R. L. Jernigan and C. C. King and others.

The Prudential Investment Co., capital stock \$5000, has been incorporated at Birmingham, Ala. The officers are A. R. Dearborn, president, and M. F. Gorman, secretary and treasurer.

The First National Bank of Brundidge, Ala., has been approved; capital \$10,000. The organizers are A. G. Seay, John A. McCachem, James F. Ramage, J. W. Reynolds and N. F. Johnson.

A report from Berryville, Ark., says that a bank with \$10,000 capital is being organized there. Among those interested are A. S. Bobo, E. B. Hinchman, J. W. Freeman and J. S. Maples.

The National Bank of Commerce of Guthrie, O. T., has been organized; capital \$100,000. The officers are J. W. McNeal, president; A. L. Cockrum, vice-president; Wm. S. Stiles, cashier.

The Granger National Bank of Granger, Texas, capital \$25,000, has been approved. The organizers are J. C. Anderson, Granger; J. W. Wayman, C. C. Gidney, E. P. Allison, M. M. Gardner and others.

The W. H. Whitehead Company has been incorporated at Goldsboro, N. C., to conduct a general insurance business; capital \$5000. The incorporators are W. H. Whitehead, T. S. Williamson and J. S. Cranford.

The Stockyards Bank has filed its charter at Louisville, Ky.; capital \$100,000. The incorporators are C. McCandless, Lytle Hudson, C. H. Werlioph, Louis P. Bornwasser, H. F. Embury, A. Zehnder and B. S. Mattingly.

The First National Bank of Rocky Mount, N. C., capital \$25,000, has been approved. The organizers are Wm. H. S. Burgwyn, Weldon, N. C.; W. S. Vaughan, S. Robbins, G. W. Robbins, M. W. Nash and others.

The Bank of Jackson has begun business at Jackson, La., with \$10,000 capital. The officers are D. H. Taylor, president;

E. S. Woodfin, first vice-president; G. G. Keller, second vice-president, and J. D. Youngblood, cashier.

The Pine Bluff Building & Loan Co. has been chartered, capital \$20,000, with offices at Hot Springs and Pine Bluff. The officers are Leo M. Andrews, president; A. H. Stearns, vice-president; J. E. Boyce, secretary and treasurer.

The Panhandle Bankers' Association has been organized at Amarillo, Texas. The officers are J. C. Paul of Panhandle, president; W. B. Slaughter of Stratford, vice-president; J. T. Sneed, Jr., of Amarillo, treasurer; S. S. Montgomery of Memphis, secretary.

The Bank of Creedmoor at Creedmoor, N. C., has been incorporated, with authorized capital of \$50,000, and \$5000 paid in. The incorporators are J. B. Mason, R. W. Winston of Durham, D. P. Wagstaff, R. H. Rogers, J. F. Sanderford of Creedmoor, and A. G. Fleming of Northside.

The Woods County Building & Investment Co. of Alva, O. T., has been approved; capital \$60,000. The organizers are W. H. Cofield, George W. Crowell, A. R. Musellar, J. A. Stine, John D. Carter, G. W. Snyder, S. B. Share, Henry E. Mason, G. E. Nickel, M. M. Fulkerson and F. F. Fennessey.

The Nelson-Miles-Hornor Company, with \$20,000 capital, has been chartered to do a general insurance business at Helena, Ark., and elsewhere. The officers are: W. L. Nelson, president; W. P. Nelson, vice-president; J. M. Hornor, secretary and treasurer, and J. B. Miles, Jr., general manager.

A bank is to be organized at Forest City, N. C., with \$12,000 capital. The directors are Dr. G. E. Young, T. P. Reynolds, S. B. Tanner, G. P. Reid, Ed. Thompson, E. L. Gaston, T. F. Wrenn, J. D. Ledbetter and J. W. Streetman. The officers are G. E. Young, president, and T. P. Reynolds, vice-president. Others interested are W. W. Hicks, C. C. Moore, Lee W. Lynch, R. P. Taylor and J. F. Alexander of Forest City, and J. G. Neil of Marion.

New Securities.

Abbeville, Ga.—The city of Abbeville will soon offer for sale 6 per cent. bonds to the amount of \$6000.

Annapolis, Md.—The board of public works will receive bids until noon on July 1 for \$825,000 of 3 1/2 per cent. State bonds of the public buildings loan.

Austin, Texas.—The issue of \$50,000 of 5 per cent. 10-20-year courthouse bonds of Hardin county has been approved and registered.

Baton Rouge, La.—The city has been authorized to issue \$1,000,000 of 25-year 3 per cent. in denomination of \$1000 each. Booneville, Miss.—The \$40,000 of 5 per cent. courthouse bonds have been sold to Seasongood & Mayer of Cincinnati at a premium of \$1005 and interest.

Carrollton, Ga.—The city has been authorized to issue \$45,000 of 5 per cent. water, sewer and electric-light bonds.

Carrollton, Miss.—The city has been authorized to issue \$10,000 of 30-year water-works bonds.

Chattanooga, Tenn.—The city council has voted for a \$1,000,000 bond issue at 4 per cent. to build an electric-power plant.

Columbia, Tenn.—The city will receive bids until 3 P. M. on July 1 for \$30,000 of 4 per cent. bonds to fund the floating debt. E. E. Erwin, recorder, may be addressed.

Conroe, Texas.—The comptroller has approved \$2000 of Conroe school bonds, 4 per cents.

Dallas, Texas.—The city proposes to sell \$80,000 of bonds, of which \$50,000 are for the Oak Cliff improvements and \$30,000 for schools.

Elgin, Texas.—The comptroller has registered \$3500 of Elgin refunding bonds.

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Greenville, Miss.—The city has been authorized to issue \$30,000 of school bonds.

Jackson, Miss.—The special election to vote on \$250,000 of water-works bonds is to be held on July 6.

Knoxville, Tenn.—An election will be held on July 9 to vote on \$750,000 of water-works bonds. On July 16 another election will be held to vote on \$425,000 of bonds for street, fire-department and school improvements.

La Grange, Ga.—An election is to be held in Troup county on July 16 to vote on \$50,000 of 4 per cent. courthouse bonds.

Louisville, Miss.—The city will issue \$5000 of internal improvement bonds.

(For Additional Financial News, See Page 34.)

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